

BANNOCKBURN: SCOTLAND'S GREATEST VICTORY

HISTORY *of* WAR

20
**BLOODIEST
BATTLES**


**MONGOL
HORDE**
MEDIEVAL TERROR
TACTICS

**CHURCHILL'S
CUT-THROATS**

Discover Britain's forgotten SBS
operations in the Aegean Sea

PLUS:
AK-47 vs M4 ✪
Canadian VC hero ✪
Anatomy of an StG 44 ✪

HITLER'S REVENGE

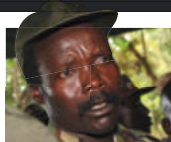
ARDENNES

Follow the chaos and catastrophe of the Third Reich's final offensive



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MESSERSCHMITT
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DOMINATE THE SKIES?



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World War I

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Welcome

“If we had reached the Meuse, we should have got down on our knees and thanked God – let alone try to reach Antwerp”

– Field Marshal Gerd von Rundstedt

On 16 December 1944, the seemingly defeated Nazi war machine shocked the world as it rumbled to life once again in the Battle of the Bulge. Complacent Allied commanders were caught off guard, panic spread through Paris, and civilians only recently liberated prepared for a new German occupation.

Though it took Allied forces entirely by surprise, supreme commander of the Western Theatre, Gerd von Rundstedt, knew the operation was ultimately as hopeless as it was ambitious.

This issue's cover feature takes you inside the most infamous

campaign of WWII – from the Führer's flawed planning to the snow-stricken chaos that unfolded in the thick forest of the Ardennes.



Tim
Tim Williamson
Editor



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GAVIN MORTIMER

In the 1940s, the islands of the Aegean sea were terrorised by a dedicated and dangerous unit of British special forces. Gavin Mortimer tells the story of this largely forgotten outfit, and how they helped win the war in the Med (page 56).



MIGUEL MIRANDA

Rebel, zealot and at one point the most wanted man in the world, Joseph Kony's brutal legacy, and his army of child soldiers, still haunts Uganda. Miguel investigates the origins of Kony's Lord's Resistance Army over on page 64.



DAVID SMITH

The Mongols forged a huge empire by means of terrifying battlefield tactics and surprisingly sophisticated technology. On page 46, David takes a look at the wily weapons and strategies that helped the great Khans enslave the Medieval world.

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Read about how the Allied soldiers resisted the Germans in the Ardennes Forest on page 26



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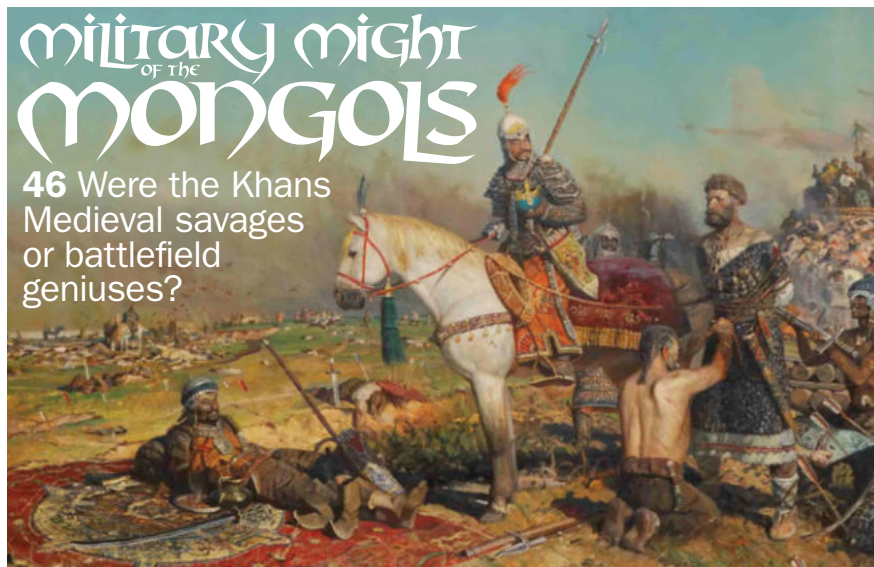
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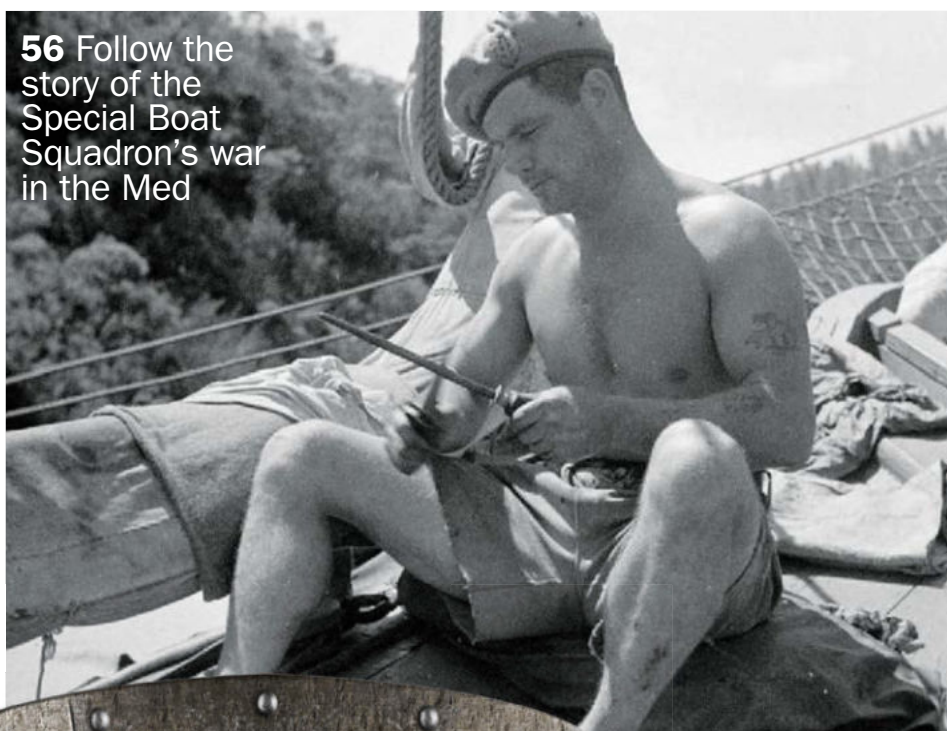
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Viking sword hilt
This unique find tells its own story of conquest from over the sea





WAR_{in} **FOCUS**

WAR'S SNOW PLAYGROUND

Taken: January 1941

Russian schoolchildren are taught how to use the tools of the battlefield with realistic military exercises, just six months before the start of the Great Patriotic War. Providing wooden replica machine guns and cannon, Red Army instructors look on and give guidance as combat drills and weapons are learned through play in Sokolniki Park, Moscow, Russia.

WAR_{in} **FOCUS**

WINTER WARMER

Taken: c. 1951

Two American 155mm howitzers mounted on M40 Gun Motor Carriages open fire on the snow-covered ground during the Korean War. These guns are from Battery B, 937th Field Artillery Battalion and arrived in the country spring 1951. Although the war would rage for another two years little territorial gain would be made by either side.







WARⁱⁿ FOCUS

“...IN A 1,500 SHAFT HORSEPOWER ARMoured SLEIGH”

Taken: 28 March 2015

Two M1A1 Abrams, with the Second Tank Battalion, Second Marine Division, take part in training exercises near Fort Pickett, Virginia. The units are seen here halted, after reacting to a gas-attack scenario, which is just one of several tests undertaken to evaluate Marines' reactions to real-life battlefield situations.



WARⁱⁿ FOCUS

NAPOLEON ON THE FIELD OF EYLAU

Painted: 1807

Antoine-Jean Gros here depicts some of the bloody mayhem that reigned in the aftermath of the Battle of Eylau, February 1807. After two days of bitter fighting between Napoleon's Grande Armée and the coalition forces of Russia and Prussia, tens of thousands of men were left dead in the snow, without either side emerging the clear victor.





ASSAULT RIFLES

Dominating the modern battlefield since the mid-20th century, these guns have become the infantryman's most versatile weapon



AK-47

THE SOVIET UNION'S ICONIC WEAPON OF THE PEOPLE

Ammunition: 7.62x39mm **Feed:** 30-round magazine

This now-infamous rifle was designed by Mikhail Kalashnikov as a cheap, simple and reliable weapon that could arm the huge Soviet armies of the Communist Bloc. While not as accurate or controllable as some Western rifles, more than 100 million AK rifles have been made since 1950, making it the most produced firearm in history.

Left: In production for nearly 70 years, dozens of AK variants have been made including the Chinese Type 56 with its folding bayonet



FN F2000

THE NEW GENERATION OF COMPACT ASSAULT RIFLES

Ammunition: 5.56x45mm

Feed: 30-round magazine

The F2000 is part of a new wave of compact, lightweight bullpup rifles including the Israeli Tavor and the SAR 21. The need for these new bullpups arose from increasingly mechanised and close-quarter urban warfare. They combine polymer stocks and compact actions to create versatile weapons for the modern battlefield.

Below: The F2000's unusual shape was ergonomically designed by FN and has fully ambidextrous controls allowing left and right-handed operators to use the rifle



STEYR AUG

THE FIRST STANDARD-ISSUE BULLPUP

Ammunition: 5.56x45mm

Feed: 30-round magazine

The AUG was the first bullpup rifle to be adopted as a country's standard-issue service rifle. Combining an integral optical sight and a reliable piston-operated action in a polymer stock, it has been used by more than 30 countries including Ireland, Australia and Tunisia.

Above: Taken on by the Austrian army in 1977, the AUG was the first bullpup adopted. France followed in 1980 with the FAMAS



FEDOROV AVTOMAT

THE FIRST ASSAULT RIFLE, DEVELOPED BY RUSSIA

Ammunition: 6.5x50mm

Feed: 25-round box magazine

The Fedorov Avtomat, designed by Vladimir Fyodorov in 1915, fired the less powerful Japanese 6.5x50mm cartridge, rather than Russia's standard rifle ammunition, making the gun more controllable when fired fully automatically. Only 3,200 Fedorov rifles were made, but these saw action during World War I and the Russian Civil War.

Above: The Fedorov was arguably the first assault rifle to be used in combat; it would be 30 years before another saw action

"ONLY 3,200 FEDOROV RIFLES WERE MADE, BUT THESE SAW ACTION DURING WORLD WAR I AND THE RUSSIAN CIVIL WAR"

FG-42

THE RIFLE OF THE ELITE
FALLSCHIRMJÄGER

Ammunition: 7.92x57mm
Feed: 20-round magazine

This gun was developed following the Luftwaffe's request for the perfect automatic rifle to arm German paratroopers. While it didn't fire an intermediate cartridge, its unique design was innovative in its action and layout. It combined the firepower of a light machine gun with the handiness and size of an infantry rifle.

A German paratrooper with an FG-42 slung over his shoulder in September 1943



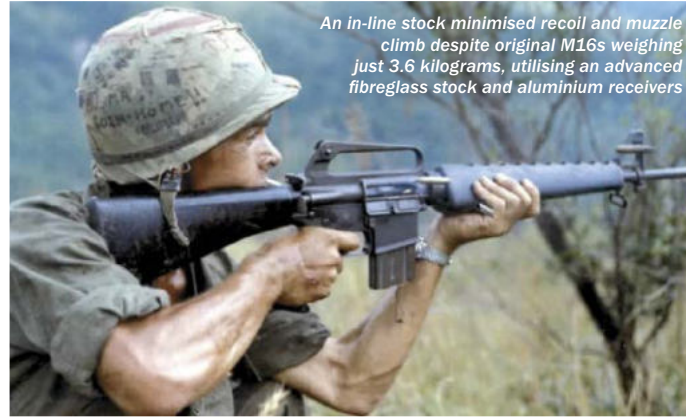
Right: The AN-94's complex action – which allows it to fire rapid, accurate bursts – prevents it from being issued to the entire Russian army

M16

THE USA'S SPACE-AGE ASSAULT RIFLE

Ammunition: 5.56x45mm Feed: 30-round magazine

Developed from Eugene Stoner's earlier AR-10, the US army adopted the M16 in 1965. The rifle suffered in the mud of Vietnam, with troops being told it was so advanced it didn't need to be cleaned. These problems, and others, were eventually fixed and an evolution of Stoner's rifle, the M4 Carbine, remains in service today.



An in-line stock minimised recoil and muzzle climb despite original M16s weighing just 3.6 kilograms, utilising an advanced fibreglass stock and aluminium receivers

AN-94

THE NEXT GENERATION OF USSR WEAPONRY

Ammunition: 5.45x39mm Feed: 30 or 45-round magazine

The AN-94 is the most advanced of a new generation of rifles, others include the AK-12 and A-545 that are currently being trialled for adoption by the Russian military. The AN-94 has been adopted in limited numbers by Russian special forces. It has a unique two-round burst system that allows two rounds to be put on target very quickly with only one round's recoil being felt.



"IT HAS A UNIQUE TWO-ROUND BURST SYSTEM THAT ALLOWS TWO ROUNDS TO BE PUT ON TARGET"

Below: More than 2 million FALs were made between 1953 and 1990, arming more than 90 countries



FN-FAL

THE RIGHT ARM OF THE
FREE WORLD

Ammunition: 7.62x59mm
Feed: 30-round magazine

While technically a battle rifle that fired a full-power cartridge, the FAL is important as it equipped almost every Western country during the Cold War. A robust, reliable and hard-hitting rifle, it was originally designed to fire the German 7.92mm Kurz intermediate round but was converted when NATO adopted 7.62x59mm.

5 Facts about ASSAULT RIFLES

HITLER CHRISTENED THE ASSAULT RIFLE

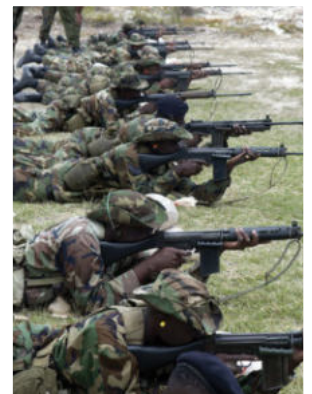
Hitler initially opposed the manufacture of the new MP43 and forbade its production. His generals hid production from him and finally managed to convince him of its worth; he named the new rifle the 'Sturmgewehr', or 'storm rifle'.

SHOOTING SCRAP

In the early 1960s, Colt salesmen toured US police departments showcasing the new AR-15, often demonstrating its devastating firepower by spraying scrap cars with bullets.

RIGHT ARM OF THE FREE WORLD

From 1953 into the 1990s, the Belgian FN-FAL dominated the world's arsenals, with it seeing service in almost 100 countries. It quickly became known as the Right Arm of the Free World.



Above: Soldiers from the Jamaica Defence Force fire their FN-FALs

BREAKDOWN SPEEDS

Russian schoolchildren are taught how to field strip AK rifles, a hangover from the Soviet era. The rifle's simplicity means that many could do it in less than 30 seconds.

FLYING THE FLAG

Mozambique's national flag has the distinction of being the only one in the world that features an assault rifle – an AK-47 – as part of the design.



Images: Alamy

ANATOMY OF THE StG 44

Introduced in 1943, Nazi Germany's Sturmgewehr 44 was the first battle-tested, mass-produced assault rifle

FRONT SIGHT POST

NO BAYONET

While earlier prototype versions of the rifle had been fitted with a bayonet lug to allow troops to fix a knife, when the rifle entered full production it was decided it was too short for bayonet fighting and the lug was eliminated.

GAS-OPERATED PISTON

The rifle used a piston driven by gases tapped from the barrel to drive the bolt back and cycle the action. This is the dominant system still in use today.

INTERMEDIATE AMMUNITION

The StG 44 fired the first truly successful and battle-tested intermediate cartridge. The 7.92x33mm 'Kurz' or short round was less powerful than standard rifle ammunition allowing for greater control and less recoil when firing.

STEADY RATE OF FIRE

Firing 500 rounds per minute, the StG 44 greatly increased the average German infantryman's individual firepower. When the Russians captured several Sturmgewehr's, they were extremely impressed by the rifle's performance.

**"SECTIONS ARMED WITH STG 44S
UNLEASHED DEVASTATING FIREPOWER
IN BOTH ATTACK AND DEFENCE"**

StG 44

ACTION: GAS OPERATED
CALIBRE: 7.92x33MM KURZ
MAGAZINE CAPACITY: 30 ROUNDS
BUILT: 1942-45
LENGTH: 94CM (37IN)
WEIGHT: 4.6KG (10.1LB)

A total of 425,977 StG 44s were produced by the end of the World War II



ACCURACY IS KING

German combat studies discovered that infantry rarely engaged the enemy beyond 400 metres and that firepower in close quarters was more important than long-range accuracy. The StG 44 was designed with this in mind and was perfect for average combat distances within a few hundred metres.

HEAVY LOAD

While the StG 44 looks sleek and modern, its stamped metal design made it significantly heavier than the standard-issue bolt-action Mauser K89k. Weighing in at 5.1 kilograms (11.4 pounds) when fully loaded, it was only two kilograms lighter than the much larger US BAR.

WOOD STOCK

As the war ground on, wood became scarce. The StG 44's only component to use this traditional material was the stock, which used a simple slab-sided piece of cheap laminated wood that fixed onto the rear of the receiver.

IN-LINE STOCK

The rifle had an in-line profile with its stock running at the same level as the barrel. This improved the weapon's controllability even when fired full-auto. This was a feature later utilised in the M16.

BOLT HANDLE

SAFETY SELECTOR

BAKELITE PISTOL GRIP

INTEGRAL SLING LOOP

STURMGEWehr: THE GENESIS OF VERSATILE FIREPOWER

More accurate than the MP40 and with more firepower than the K98k, the StG 44 gave German troops a weapon with versatile firepower. This was desperately needed on the Eastern Front, where increased firepower to stem Soviet infantry attacks was essential. Issued to elite ski and mountain troops, Panzergrenadiers and the Waffen-SS, initially entire companies were equipped with the new rifle. However, as the war entered its final phases, production could not meet demand and it was increasingly issued to just several men per platoon. Sections armed with StG 44s unleashed devastating firepower in both attack and defence. The Sturmgewehr's characteristics became the blueprint for all future assault rifles that followed, with every major power adopting lightweight, select-fire rifles that offered balanced, versatile firepower.

Below: A soldier demonstrates the transitional MP 43/1 variant, used to determine the suitability of the rifle for sniping purposes in 1943



Illustration: Alex Pang www.alexpangillustration.com

CUTTING-EDGE STAMPED RECEIVER

Advanced new metal stamping techniques were used to replace more intensive milling and machining to minimise manufacturing time. However this also meant the rifle was weaker and the receiver could be dented with rough use.

MAGAZINE

TRIGGER

SELECTOR SWITCH

Troops had the option of single shots or fully automatic fire. On the Eastern Front, soldiers fired the Sturmgewehr in bursts to suppress the enemy as they attacked defensive positions.

HEROES & INVENTORS

Genius engineers and steadfast fighters have added their own stories to the history of these formidable weapons

MIKHAIL KALASHNIKOV

YEARS ACTIVE: 1938-2013

AFFILIATION: RED ARMY & IZHEVSK MACHINEBUILDING PLANT

Born into a farming family in Kurya, Kazakhstan, in 1919, Kalashnikov's career as a 'Konstruktor', or Soviet weapons designer, began when he was wounded during World War II and was invalided home to convalesce. He began work on several sub machine gun designs that proved his promise. In 1943, he began work on an automatic rifle chambered in the new Soviet M1943 intermediate cartridge. Over the next three years, he and his design team worked on what would become the Avtomat Kalashnikova. The first practical prototype, the AK-46, was substantially different from what would become the finished product and was deemed too complicated. He refined the design with the assistance of Vasily Lyuty, Vladimir Deikin and possibly Hugo Schmeisser, the designer of the MKb.42(H)/StG 44.

The rifle was officially adopted in 1948, but the first decade of its service is shrouded in secrecy.

Production of the rifle was initially slow, and widespread issuing of the AK-47 did not begin until 1956, with specialist units receiving them first. With the development of the smaller 5.45x39mm round in the 1960s, a new rifle was required, so under Kalashnikov's guidance, the AK was refined and adopted.

Kalashnikov also developed the PK series of general-purpose machine guns, while the RPK is also based on his original design. The AK is the world's most produced firearm with more than 100 million made since the 1950s and many countries producing their own clones. Its ruggedness and reliability made the rifle ideal for poorly trained conscripts and guerrillas and became extremely popular across Africa and Asia. The rifle has served as the Russian army's service rifle for almost 60 years and Kalashnikov continued to hold the title of chief designer at Izhevsk until his death in 2013, at the age of 94.

Konstruktor Kalashnikov poses by the drawing board used to draw up the blueprints for the AK-47

CORPORAL ROBERT O'MALLEY

YEARS ACTIVE: 1961-66
FORCE: US MARINE CORPS

On 18 August 1965, the 3rd Battalion, 3rd US Marines launched an amphibious assault on Viet Cong positions near the village of An Cuong. The Marines were quickly pinned down by mortar and machine-gun fire from Viet Cong trenches. Corporal O'Malley's squad opened up suppressive fire with their M14s as O'Malley charged across a rice paddy to attack the enemy trench lobbing grenades and spraying the trench with automatic rifle fire.

With the trench clear, he regrouped his squad and was ordered to evacuate by helicopter. As his men boarded the chopper, O'Malley was hit by shrapnel from a mortar, piercing his lung. He refused to be moved, and instead he remained in an exposed position laying down suppressive fire until his squad were aboard the chopper. O'Malley survived and was evacuated; for his actions he was promoted to sergeant and awarded the Medal of Honor.

"HE REMAINED IN AN EXPOSED POSITION LAYING DOWN SUPPRESSIVE FIRE UNTIL HIS SQUAD WERE ABOARD THE CHOPPER"



O'Malley was awarded the USA's highest military award – the Medal of Honor – for his actions in Vietnam

EUGENE STONER

YEARS ACTIVE: 1954-97 **AFFILIATION:** ARMALITE & COLT

While Stoner's most famous design is unquestionably the AR-15, which became the US military's M16, he was not the sole designer. In fact, the rifle was built around Stoner's earlier design the Armalite AR-10. The AR-10 was a futuristic lightweight battle rifle chambered in the 7.62x51mm NATO cartridge. The AR-15 was designed to be even lighter, firing the smaller 5.56x45mm NATO round, but it used Stoner's direct impingement gas system to cycle the rifle. Stoner left Armalite in 1961 and worked as a consultant engineer at Colt and later Cadillac Gage, where he designed the Stoner 63, a modular weapon system that could be configured as an assault rifle, light machine gun or a general-purpose machine gun. During his long career, Stoner worked on everything from survival rifles to 25mm cannons. His final design – the SR-25, a versatile marksman's rifle – is still in use in the US military today.

Below: A US Navy SEAL in Vietnam with a Stoner 63A light machine gun



CORPORAL BRYAN BUDD

YEARS ACTIVE: 1996-2006
FORCE: BRITISH ARMY

During a clearance operation in the Afghan town of Sangin, Corporal Budd's patrol was ambushed by Taliban insurgents. Budd, spotting advancing Taliban, led his section on a flanking attack. However, they came under heavy fire before they could launch their assault. The enemy opened up with RPGs and light machine guns on the patrol from the opposite edge of a corn field. The patrol took heavy casualties with three men wounded in minutes. Realising that his section was in a desperate situation, Budd decided to attack the Taliban position. He charged across the cornfield alone with his bayonet fixed to his L85A2, and he engaged the enemy firing his rifle fully automatically from the hip. His men lost contact with him and hours later his body was found beside three dead insurgents. Budd was possibly killed in the crossfire by friendly fire but his actions allowed his patrol to retreat safely. He was posthumously awarded the Victoria Cross for his gallantry.



LIEUTENANT MICHAEL MURPHY

YEARS ACTIVE: 2000-05
FORCE: US NAVY SEALS

In June 2005, Lieutenant Murphy led a small reconnaissance team to locate Taliban leader Ahmad Shah. The Taliban were alerted to their mission and Murphy's compromised team was attacked by a band of 30 to 40 fighters. Surrounded, the team held back the enemy with rifle fire until all four had been wounded. Murphy moved to an exposed position to call for support and was mortally wounded while radioing headquarters. He managed to drag himself back to cover and continued engaging the Taliban with suppressive rifle fire; up to 20 enemy were killed by the team. A helicopter carrying reinforcements was downed by RPG fire and only one member of Murphy's team survived. For his bravery, Murphy was awarded the Medal of Honor. The failed operation was later made into the Hollywood movie *Lone Survivor*.

Murphy was commissioned into the US Navy in 2000, joining the SEALs a year later



STEFAN JANSON

YEARS ACTIVE: 1939-1987
AFFILIATION: POLISH ARMY,
UK ARMAMENT DESIGN DEPARTMENT

In 1940, Janson fled his native Poland, escaping via Yugoslavia, Italy and France to Britain where he joined a team of Polish exiles who worked on new weapons for the British Army. After the war he remained in Britain and was the lead designer of the revolutionary but ill-fated EM-2 bullpup rifle. Designed as the next generation of infantry weapon, the rifle was briefly adopted before political wrangling saw it abandoned in favour of the Belgian FN FAL. Janson left the UK to work for the Winchester/Olin Corporation where, in response to the US Army's SALVO project in the late 1950s, he developed the Olin/Winchester Salvo Rifle, a double-barrelled battle rifle designed to increase an infantryman's firepower. He remained at Winchester developing shotguns and other firearms before retiring.

ASSAULT RIFLES OF THE WORLD

Dominating the world's battlefields since the 20th century



Left: A US soldier aims his M14

US RIFLES

M14

Calibre: 7.62x51mm NATO
In service: 1959-present

M16

Calibre: 5.56x45mm NATO
In service: 1963-present



VALMET M76

Calibre: 5.56x45mm NATO
In service: 1976-present
Location: Finland

FN FAL

Calibre: 7.62x51mm NATO
In service: 1954-present
Location: Belgium, various countries

STG 44

Calibre: 7.92x33mm Kurz
In service: 1942-45
Location: Germany

SIG 550

Calibre: 5.56x45mm NATO
In service: 1990-present
Location: Switzerland

L85A2

Calibre: 5.56x45mm NATO
In service: 1985-present
Location: UK

RIBEYROLLE CARABINE 1918

Calibre: 8x35mm Ribeyrolle
In service: 1918
Location: France

FAMAS

Calibre: 5.56x45mm NATO
In service: 1981-present
Location: France

BERETTA ARX-160

Calibre: 5.56x45mm NATO
In service: 2008-present
Location: Italy

CETME MODEL L

Calibre: 5.56x45mm NATO
In service: 1984-99
Location: Spain

VZ 58

Calibre: 7.62x39mm
In service: 1959-present
Location: Czech Republic & Slovakia

2 ARMALITE AR-18

5.56x45MM NATO
1969-79 USA, VARIOUS COUNTRIES

Intended as a cheaper, simpler alternative to the M16, the AR-18 was never officially adopted by any nation, however, its action inspired later designs including the L85, SAR-80 and the G36.



1 FN SCAR

5.56x45MM & 7.62x51MM NATO
2009-PRESENT BELGIUM, VARIOUS COUNTRIES

Fabrique National's latest assault rifle is available in various configurations. The SCAR's modularity has proved popular, with the Belgian army and various special forces units adopting it.



Left: SCAR is an acronym for Special Operations Forces Combat Assault Rifle

3 TAVOR TAR-21

5.56x45MM NATO

2009-PRESENT ISRAEL

Israel's latest service rifle battle tested and refined its bullpup configuration, which was designed with the mobile and urban warfare the Israeli army fights in mind.



Above: The Tavor was designed to maximise ease of maintenance

RUSSIAN RIFLES

FEDEROV AVTOMAT

Calibre: 6.5x50mmSR

In service: 1915-45

AK-47

Calibre: 7.62x39mm

In service: 1949-present

AK-74

Calibre: 5.45x39mm

In service: 1974-present

AN-94

Calibre: 5.45x39.5mm

In service: 1995-present

"THE SCAR'S MODULARITY HAS PROVED POPULAR, WITH THE BELGIAN ARMY AND VARIOUS SPECIAL FORCES UNITS ADOPTING IT"

INSAS

Calibre: 5.56x45mm NATO

In service: 1998-2015

Location: India

QBZ-95-1

Calibre: 5.8x42mm

In service: 1995-present

Location: China

DAEWOO K2

Calibre: 5.56x45mm NATO

In service: 1987-present

Location: South Korea

SAR-21

Calibre: 5.56x45mm NATO

In service: 1999-present

Location: Singapore

5 HK G36

5.56x45MM NATO

1996-PRESENT GERMANY, VARIOUS COUNTRIES

Chambered in the smaller 5.56mm NATO round, the G36 replaced the older and heavier G3. It uses an action similar to the AR-18s and has a modern lightweight polymer stock.

6 CZ 805 BREN

5.56x45MM NATO

2009-PRESENT CZECH REPUBLIC

Unveiled in 2006 but not ordered by the army until 2009, the Czech Republic has begun replacing its Cold War-era vz 58s with the CZ 805 BREN. Like the FN SCAR, it uses lightweight materials and can be adapted to fire multiple kinds of ammunition.



US soldiers fire the G36 in order to earn the German Army Marksmanship Badge

Right: Czech Army soldiers in training with their CZ 805 BRENS

Left: The G3 remains in service, seeing extensive use in Afghanistan, where its 7.62mm round can reach further than the G36's smaller 5.56mm round

4 HK G3

7.62x51MM NATO

1959-PRESENT GERMANY, VARIOUS COUNTRIES

Developed by Heckler & Koch from the prototype StG 45(M), it became the FN FAL's principle rival with the West German army adopting it in 1959. It remains in limited service with the German army.



HEAD TO HEAD

In Afghanistan, two iconic assault rifles, the M4 and AK-47, faced one another, but how do they compare?

M4

YEARS IN OPERATION: 1994-PRESENT **COUNTRY:** USA

ACCURACY

The M4's high-velocity ammunition is substantially more accurate than the AK's. It has better ballistics and a flatter trajectory, with its smaller size giving it less recoil, allowing greater accuracy.

HANDLING

The M4 is ergonomically superior, with fast magazine changes, simple and accessible controls and an in-line stock profile that improves handling. However, it has a cumbersome charging handle and its action prevents the use of folding stocks.

MAINTENANCE

The M4 is undoubtedly more sophisticated than the AK with a far more complex bolt and using more advanced materials. This makes it trickier to maintain, and more expensive, costing nearly \$700 a rifle.

RELIABILITY

The M4 initially suffered some reliability issues with troops reporting jams and failures to feed. In Iraq and Afghanistan, the rifle had some problems with sand and dust, although troops reported no major failings.

RATE OF FIRE

The M4 has a much higher rate of fire than the AK, at 700 to 900 rounds per minute. Its smaller ammunition and in-line stock profile also make it much more controllable.

TOTAL



M4 CARBINE

LENGTH: 84CM
WEIGHT: 2.8KG
CALIBRE: 5.56x45MM
FEED: 30-ROUND BOX MAGAZINE
CYCLIC RATE: 800 ROUNDS/MINUTE
EFFECTIVE RANGE: 500M

URBAN WARFARE

When it was adopted, the M16 was a truly advanced weapon. Made of lightweight materials, it was light and handy. The M4 that replaced it was designed for mobile urban combat, where a shorter rifle was needed. The war in Afghanistan highlighted some issues in sandy conditions, and another major problem reported by troops was that they were frequently being outranged by the AK-47's more powerful but less accurate 7.62x39mm round. The M4, with its shorter barrel and smaller ammunition, didn't have the power to engage the enemy at longer ranges. This problem was solved by the issuing of dedicated marksman's rifles that fired more powerful ammunition to support the M4s. The M4 has been in service with the USA and dozens of other countries successfully for more than 20 years. The latest iteration, the M4A1, was introduced in 2014.



“The rifle’s ruggedness allowed the Taliban to hide AKs in hastily dug caches and return months later to working weapons”

THE MOST ABUNDANT WEAPON ON EARTH

The AK’s key attributes are its simplicity and reliability. Its rugged, low-maintenance design has endeared it to countless armies and guerrilla forces around the world. During the Soviet invasion of Afghanistan, the AK was used by both sides, with the Taliban favouring the AK-47. It proved ideal for use in the dry, sandy conditions of the Afghan wadis and mountains. The rifle’s ruggedness allowed the Taliban to hide AKs in hastily dug caches and return months later to working weapons. The gun’s simplicity and cheapness mean that tens of millions have been made, with more than 100 countries, guerrilla units and terrorist organisations around the world using them.



Above: Taliban members pose with their AKs

AK-47

YEARS IN OPERATION: 1950-PRESENT
COUNTRY: SOVIET UNION/RUSSIA

ACCURACY

The USSR developed the 7.62x39mm round in 1943, using it first in the SKS and then the AK-47. It’s heavier than the M4’s ammunition and its ballistics mean that it is less accurate at ranges beyond 300 metres.

HANDLING

The Kalashnikov is simpler to maintain and use, with fewer parts and simpler controls.

However, ergonomically, the AK is less refined than the M4 and lacks a last-round hold open, slowing reloading.

MAINTENANCE

The AK-47’s simple design is both a blessing and a curse. Its loose production tolerances and stamped metal construction make it both simple to use with minimal controls, but compromises its accuracy.

RELIABILITY

The AK can function with little to no maintenance. Its design is so simple that it can be buried in mud for days and still function. Its rugged gas system ensures it continues to fire even when dirty.

RATE OF FIRE

Cycling at 600 rounds per minute, the AK-47 can empty its 30-round magazine in seconds.

However, its more-powerful 7.62x39mm ammunition creates greater recoil and makes holding the rifle on target in fully automatic fire almost impossible.

TOTAL



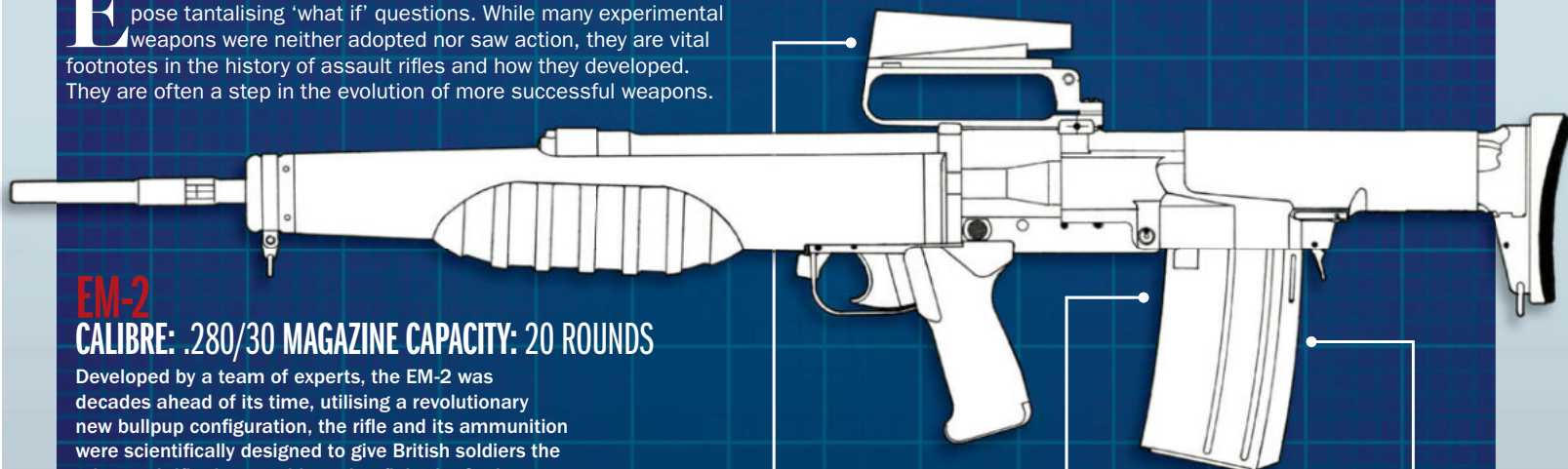
AK-47

LENGTH: 88CM
WEIGHT: 4.3KG
CALIBRE: 7.62x39MM
FEED: 30-ROUND BOX MAGAZINE
CYCLIC RATE: 600 ROUNDS/MINUTE
EFFECTIVE RANGE: 350M

EXPERIMENTAL RIFLES

Prototype weapons that were never adopted are often the forbearers of the most iconic designs

Experimental assault rifles such as the EM-2 or HK G11 often pose tantalising 'what if' questions. While many experimental weapons were neither adopted nor saw action, they are vital footnotes in the history of assault rifles and how they developed. They are often a step in the evolution of more successful weapons.



EM-2

CALIBRE: .280/30 **MAGAZINE CAPACITY:** 20 ROUNDS

Developed by a team of experts, the EM-2 was decades ahead of its time, utilising a revolutionary new bullpup configuration, the rifle and its ammunition were scientifically designed to give British soldiers the advanced rifle they would need to fight the Soviets. However, the USA rejected it and blocked it from becoming NATO's standard issue rifle.

"THE EM-2 WAS THE FIRST SERVICE RIFLE DESIGNED TO INCORPORATE AN INTEGRAL OPTICAL SIGHT"

INTEGRATED OPTICAL SIGHT

The EM-2 was the first service rifle designed to incorporate an integral optical sight, which improved marksmanship and target acquisition.

INTERMEDIATE AMMUNITION

The EM-2 was chambered in a specially designed intermediate cartridge, which was smaller than full-power rifle rounds but allowed troops to carry twice the ammunition and made the rifle more controllable.

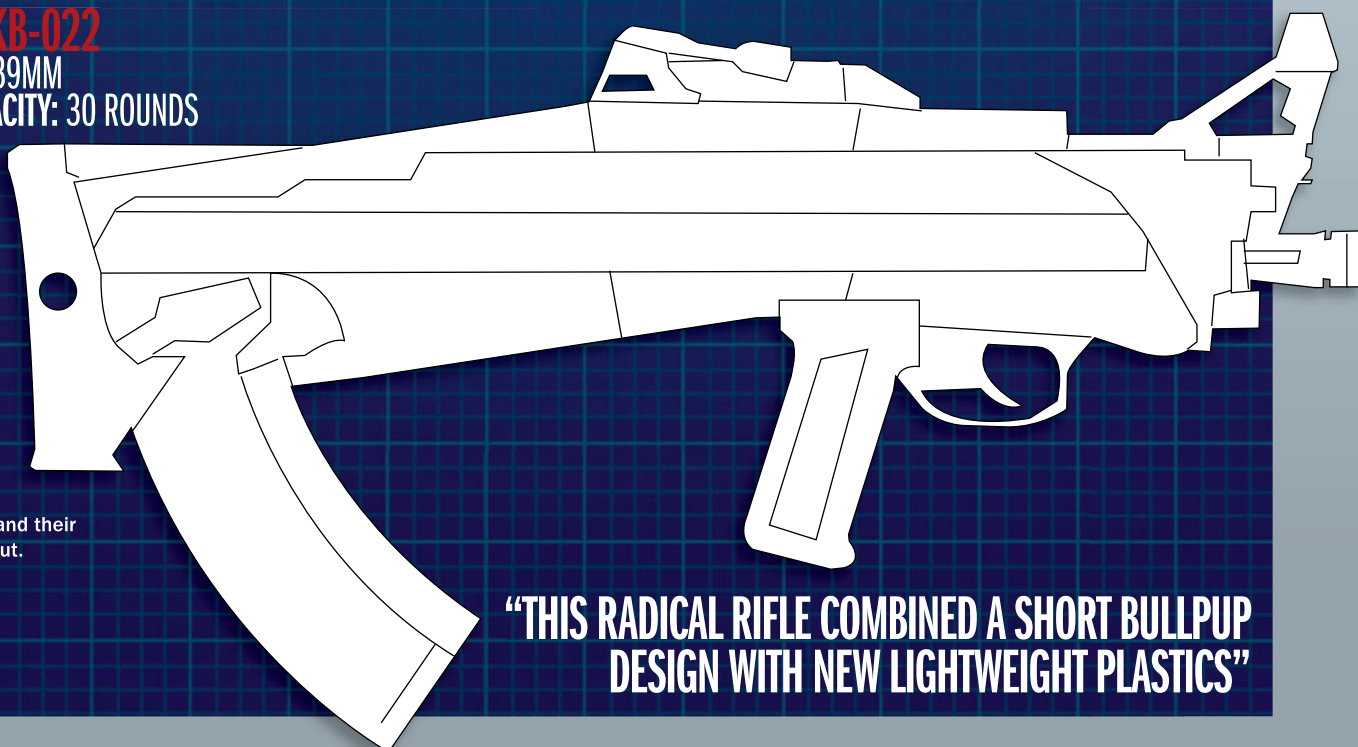
LIGHTWEIGHT BULLPUP

The EM-2's unconventional layout saw the magazine and action placed behind the trigger group, shortening its overall length considerably. This made the EM-2 a lighter, handier weapon.

KOROBOV TKB-022

CALIBRE: 7.62×39MM
MAGAZINE CAPACITY: 30 ROUNDS

Developed by GA Korobov as a possible replacement for the AK-47, this radical rifle combined a short bullpup design with new lightweight plastics. Decades ahead of their time, Korobov's designs were rejected, like many earlier bullpups, because of their complexity and their unconventional layout.



"THIS RADICAL RIFLE COMBINED A SHORT BULLPUP DESIGN WITH NEW LIGHTWEIGHT PLASTICS"



“DEVELOPED BY PAUL RIBEYROLLES, THIS WAS ONE OF THE EARLIEST FIREARMS THAT COULD BE DESCRIBED AS A TRUE ASSAULT RIFLE”

CARABINE MITRAILLEUSE 1918

CALIBRE: 8×35MM RIBEYROLLES
MAGAZINE CAPACITY: 25 ROUNDS

Developed by Paul Ribeyrolles, this was one of the earliest firearms that could be described as a true assault rifle. Chambered in the first purpose-made intermediate cartridge, the Carabine 1918 used a simple blow-back action. The rifle never saw action but is an important early footnote in the history of the assault rifle.

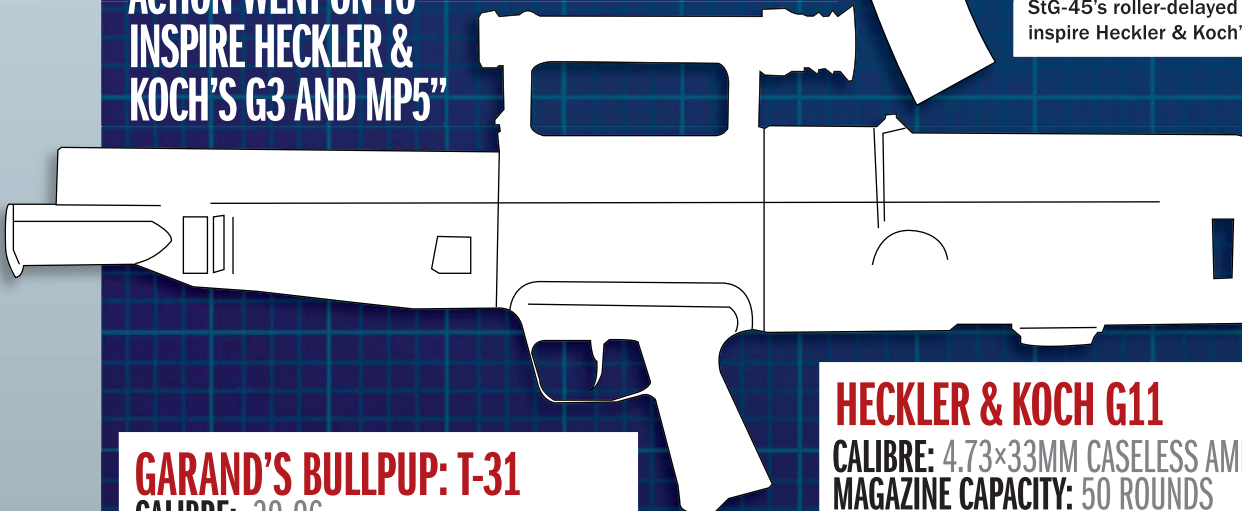


“THE STG-45’S ROLLER-DELAYED BLOW-BACK ACTION WENT ON TO INSPIRE HECKLER & KOCH’S G3 AND MP5”

STG-45(M)

CALIBRE: 7.92×33MM KURZ
MAGAZINE CAPACITY: 30 ROUNDS

Developed by Mauser late in World War II to replace the StG-44, the simpler StG-45 was cheaper and easier to manufacture. The war ended before production could begin and only 30 prototypes were made. However, the StG-45’s roller-delayed blow-back action went on to inspire Heckler & Koch’s G3 and MP5.



GARAND'S BULLPUP: T-31

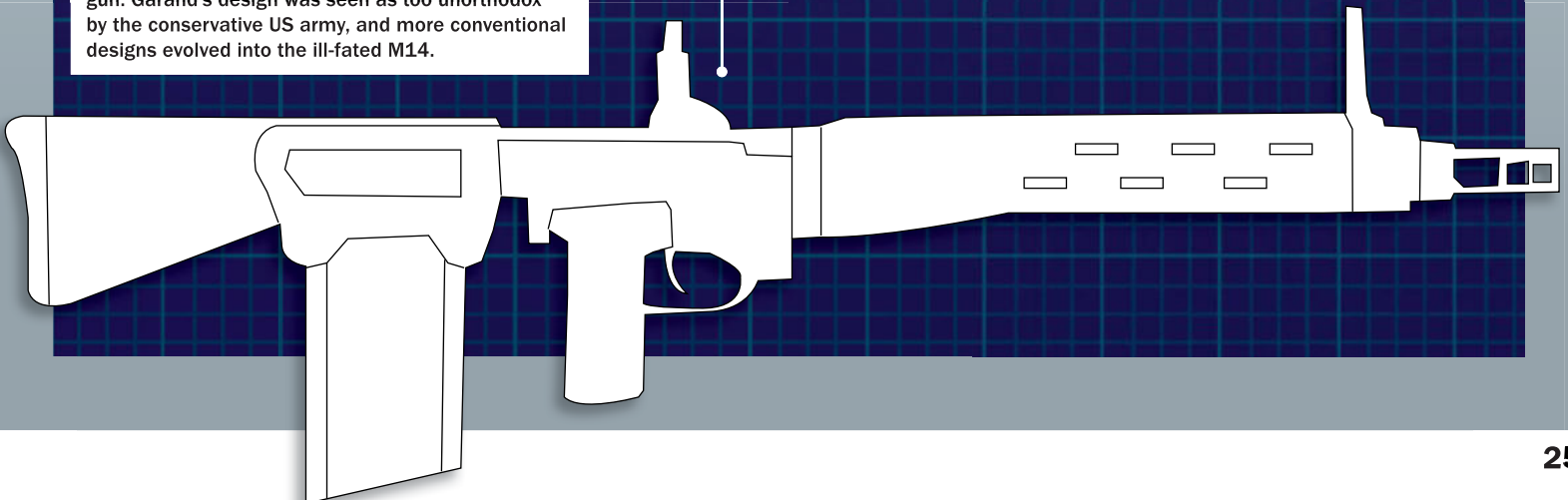
CALIBRE: .30-06
MAGAZINE CAPACITY: 20 ROUNDS

At the same time as the British were experimenting with bullpup rifles, John Garand, the inventor of the USA's legendary M1 Rifle, was also developing a new gun. Garand's design was seen as too unorthodox by the conservative US army, and more conventional designs evolved into the ill-fated M14.

HECKLER & KOCH G11

CALIBRE: 4.73×33MM CASELESS AMMUNITION
MAGAZINE CAPACITY: 50 ROUNDS

In development for more than 20 years, the G11 represented a quantum leap forward in small-arms technology combining caseless ammunition and a complex action that allowed it to fire extremely rapid three-round bursts. The reunification of Germany and budget cuts meant that neither Germany or the USA chose to adopt the G11.



HITLER'S REVENGE ARDENNES

WORDS DR PETER CADDICK-ADAMS

After 70 years, aided by numerous books and an atrocious war movie, we think we know everything about the Battle of the Bulge. However, new research could be about to re-write the history of the Third Reich's final offensive

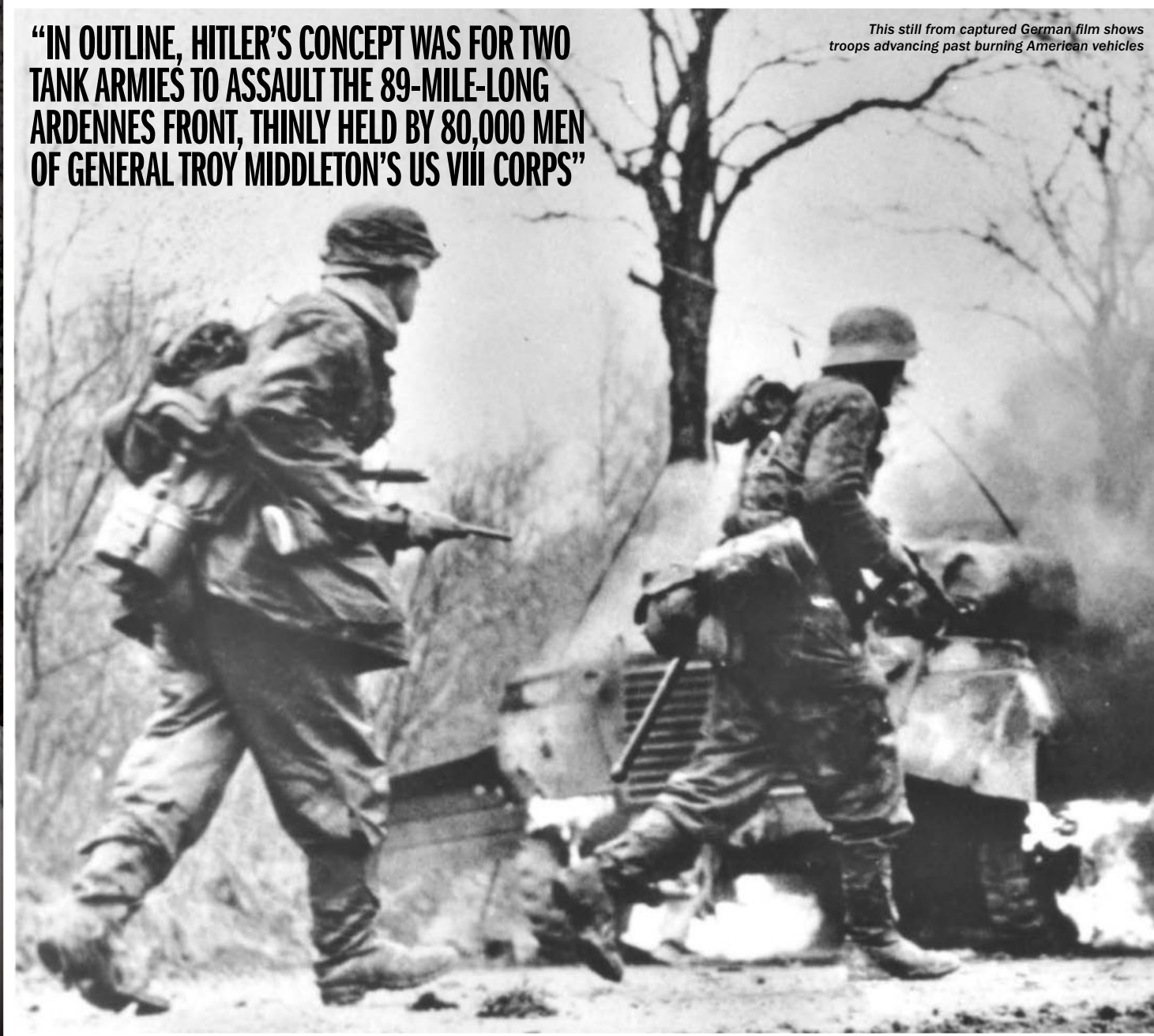
December each year focuses the mind on the winter Ardennes Campaign of 1944, one of Germany's last major offensives against the Western Allies after D-Day. It began on 16 December in appalling weather and took the Allies by complete surprise. However, after some initial successes, the attack had stalled by Christmas and petered out by mid-January, costing each side between 80-100,000 casualties.

Wacht am Rhein

In outline, Hitler's concept was for two tank armies to assault the 89-mile-long Ardennes front, thinly held by 80,000 men of General Troy Middleton's US VIII Corps. In the first wave, Middleton's GIs would be attacked by more than 200,000 Germans with 600 tanks and other tracked vehicles. In the north, General

“IN OUTLINE, HITLER’S CONCEPT WAS FOR TWO TANK ARMIES TO ASSAULT THE 89-MILE-LONG ARDENNES FRONT, THINLY HELD BY 80,000 MEN OF GENERAL TROY MIDDLETON’S US VIII CORPS”

This still from captured German film shows troops advancing past burning American vehicles



Josef Dietrich's Sixth Panzer Army, composed mainly of SS units, was ordered to slice through US lines, swarm over the Elsenborn Ridge, cross the mighty Meuse river at Liège and head for Antwerp. On their left flank, Baron Hasso von Manteuffel's Fifth Panzer Army would cross the hills and river network to their front between Saint Vith and Bastogne, aim for Namur on the Meuse, and beyond, for Brussels.

The initial plan was for the northern flank to be protected by the German 15th Army, but in the event they contributed nothing to the operation, being exhausted by the recent Market Garden and Hürtgen Forest campaigns. However, guarding the southern flank was Erich Brandenberger's Seventh Army, heavy in infantry but with no armour at all. Their task was also to effect a river crossing, advance to the vicinity of Luxembourg City and block any counter attacks, which were widely expected from the general the Germans most feared – George Patton – and his US Third Army.

The GIs spaced along the Ardennes comprised a mixture of tested veteran infantrymen in the Second, Fourth and 28th Divisions, and 'greenhorns' such as the recently arrived 99th and 106th Divisions. Yet even the battle-hardened Fourth and 28th were full of replacement men, having lost huge numbers in the hell of the Hürtgen Forest campaign, which had just ended. Nevertheless, even the newest American recruit had received months of useful training before deployment, and was supported by the industrial might of the United States.

Initially codenamed Wacht am Rhein ('Watch on the Rhine'), the attack was planned personally by the Führer. Its genesis is usually ascribed to a conference in the Wolf's Lair (his East Prussian headquarters) on 16 September, when Hitler suddenly demanded a massive panzer counter attack with air support to retake Antwerp, which had just fallen. The thrust was to commence on 1 November, when the usual

autumnal weather of low cloud and fog would ground the Allied air forces.

Hitler's choice of Antwerp was strategic – he knew the port would drastically rebalance the Allies' logistics. Until that moment, his British, American and Canadian opponents were having to drag their supplies – at a huge cost in fuel – the 300 miles from the Normandy beaches to the front, as no other working harbours had been captured. The use of Antwerp (admittedly the German-occupied banks of the Scheldt estuary leading to Antwerp had yet to be subdued) could shorten this journey by two-thirds and enable the Allies to deploy their massive logistics resources to maximum effect.

In fact, as early as 31 July, we now know that Hitler ordered Germany's western frontier defences, known as the Siegfried Line, to be re-strengthened and rearmed. Strikingly, he also instructed General Jodl at OKW (Oberkommando der Wehrmacht, or Supreme Command of the Armed Forces) to study the



A destroyed US half-track can be seen behind this German soldier signalling to his unit

documents relating to 'dem Vorbild des Jahres 1940' – the 'role model of 1940' – meaning the successful German attack through the Ardennes into France.

Thus, it seems that Hitler anticipated the defeat in Normandy, followed by the Allied advance to the Siegfried Line. The OKW historian, Major Percy Schramm, a pre-war professor of history, dug out the 1940 files and noted how Hitler's favourite general, Erwin Rommel, had sliced through the Belgian-French defences in the heavily wooded Ardennes with his Seventh Panzer Division in just three days. So the conference on 16 September, which is often reported as Hitler having a sudden brainwave for the counter attack, was in fact the result of several weeks of planning and research by OKW staff.

Analysis of those present in the Wolf's Lair on 16 September shows the usual assembly of military officers, but after a situation report, Hitler went into a private session with a chosen few, where he announced the planned counter stroke. At this second meeting were representatives of the SS, Luftwaffe and diplomatic corps – a guest list that seems to have been carefully chosen – and not the usual collection of bystanders at a military briefing.

We can now conclude that it was essentially an attempt by Hitler to reassert his control over the Third Reich.

Colonel Count Claus von Stauffenberg's bomb plot of 20 July had shaken the Führer so much that he had withdrawn into himself, accompanied by a breakdown in his health. He also assumed the failed assassination would encourage other groups at the heart of the Reich to stage another coup, but if he could pull off a further spectacular victory, this might be averted. His best victory was, of course, the conquest of France in May-June 1940 – heralded by the Ardennes attack.

Lessons from Market Garden

At every level, from Eisenhower's Supreme Headquarters Allied Expeditionary Force (SHAEF) downwards, the Allies assumed from late August 1944 that after their victory in Normandy, the German forces were spent and the war might be concluded by Christmas – Ike's staff called this the 'Happy Hypothesis'. So, it comes as no surprise to find that while Hitler on 16 September was pointing at maps and explaining his plan for a massive panzer thrust to Antwerp, 120 miles away, the Allies were preparing something very similar.

At almost the same hour, Lieutenant-General Brian Horrocks of Britain's XXX Corps was briefing his officers on a daring Allied venture to push armour down a 60-mile corridor, deep into German lines in Holland – 'objective Arnhem'. The 'Happy Hypothesis' that the German Army in the west was finished would soon unravel in Operation Market Garden, which began the following day.

After its completion, both sides should have learned more from the failed airborne assault than they did. The ability of scantily trained Luftwaffe and army battlegroups, hastily summoned to the Market Garden area to prevail alongside the Waffen-SS, should have warned the Allies what they could expect in the future, for it was precisely this mix of veteran and green multiservice troops that would emerge out of the Ardennes on 16 December.

For the Germans, if Horrocks' XXX Corps was unable to manage the 60 miles to Arnhem in good weather with air superiority, what hope had the Ardennes venture of reaching Antwerp, which was double the distance, in poor weather and without air cover?

Hitler pushed ahead with his plans, rejecting out of hand all protests from his military staff to scale down or cancel the assault.

THE SOLDIERS OF AUTUMN MIST

UNITS ASSIGNED TO THE OPERATION WERE A MIXTURE OF HARDENED VETERANS, ZEALOUS VOLUNTEERS AND CAJOLED CIVILIANS

On paper, the attacking armies were very different in their makeup. The Sixth was dominated by the Waffen-SS, the Fifth by the army's elite panzer formations and the Seventh comprised poorly equipped infantrymen. In practice, the three formations were to have in their vanguard newly raised infantry divisions designated as Volksgrenadiers. These were all established in the autumn of 1944 and were smaller in size than their predecessors. Their officers and NCOs had somehow survived the Russian front. Most of the rank and file were the very young – Hitler Youths aged as young as 16 – and much older men who had so far escaped conscription. These included men up to 45 who were heads of families, farmers, employees of the state railways or war workers in weapons factories, whose jobs were taken by German women or skilled foreign labour.

In addition, Luftwaffe personnel and Kriegsmarine sailors who no longer had planes or ships to maintain found themselves re-rolled as infantry. Ethnic Germans were also inducted into the army and convalescent troops were discharged from hospital early, to be posted to the new combat units. Most of these groups proved reluctant infantrymen, and were often slow learners over the couple of months in which they had to learn soldiering – from scratch.

The Sixth Army's commander, Josef 'Sepp' Dietrich, was an early party member, former chauffeur and bodyguard of Hitler's, and entrusted with the starring role of taking Antwerp. As a favourite of the Führer, his men were assigned the lion's share of the available engineers, and bridging and anti-aircraft units, as well as possessing the well-equipped First and 12th SS Panzer Divisions. Often overlooked was the fact that his infantry were Volksgrenadier formations, not cutting-edge Schutzstaffel. Traditional accounts of his SS

units have emphasised their combat experience, but new research proves that by 1944 they were accepting conscripts, former Luftwaffe personnel and ethnic

Germans into their ranks, as well as hardened Nazi volunteers. The fighting effectiveness of all SS sub-units was further diluted by their lack of training and the staggering losses in men and equipment they had suffered in Normandy. One SS colonel complained to a colleague of the Ukrainian replacements assigned to him "who do not even speak German," adding, "There is a shortage of everything... and no transport to bring forward mortars and anti-tank guns... Heil Hitler!"

In the Fifth Army, led by the short, wiry former Olympic athlete Baron von Manteuffel, the same drawbacks applied to the tank formations (Second, 116th and Panzer Lehr Divisions), which started the campaign with only a fraction of the armoured vehicles and experienced crews they had deployed to Normandy in June. They were likewise supported by Volksgrenadiers – who were unable to keep up.

Manteuffel, a tactically insightful commander, observed that his terrain offered better going for armour than that assigned to Dietrich. He was disappointed that both Skorzeny's commandos and an air assault by paratroopers were to be deployed only in support of the Sixth Army.

The baron warned Berlin that relatively small road blocks could hold up Dietrich's advance, whereas the open country to his Fifth Army's front would favour paratroopers, gliders and flanking manoeuvres. All such suggestions for improvements to the plan, however, were ignored by Berlin, because of Hitler's refusal to change even minor details. Besides, they challenged the potential of the Führer's beloved SS. The scheme was his, and launched in defiance of even his field marshals.

Gerd von Rundstedt, supreme commander in the west, was a sceptic from the start, afterwards observing, "It was nonsensical; if we had reached even the Meuse, we should have got down on our knees and thanked God." Closer to the planning was Field Marshal Walther Model of Army Group 'B', who privately announced beforehand, "This plan hasn't got a damned leg to stand on," and admitting to Colonel Friedrich von der Heydte (leader of the paratroopers supporting Dietrich's Sixth Army), "The entire operation has no more than a ten per cent chance of success."

General Hasso von Manteuffel in August 1944



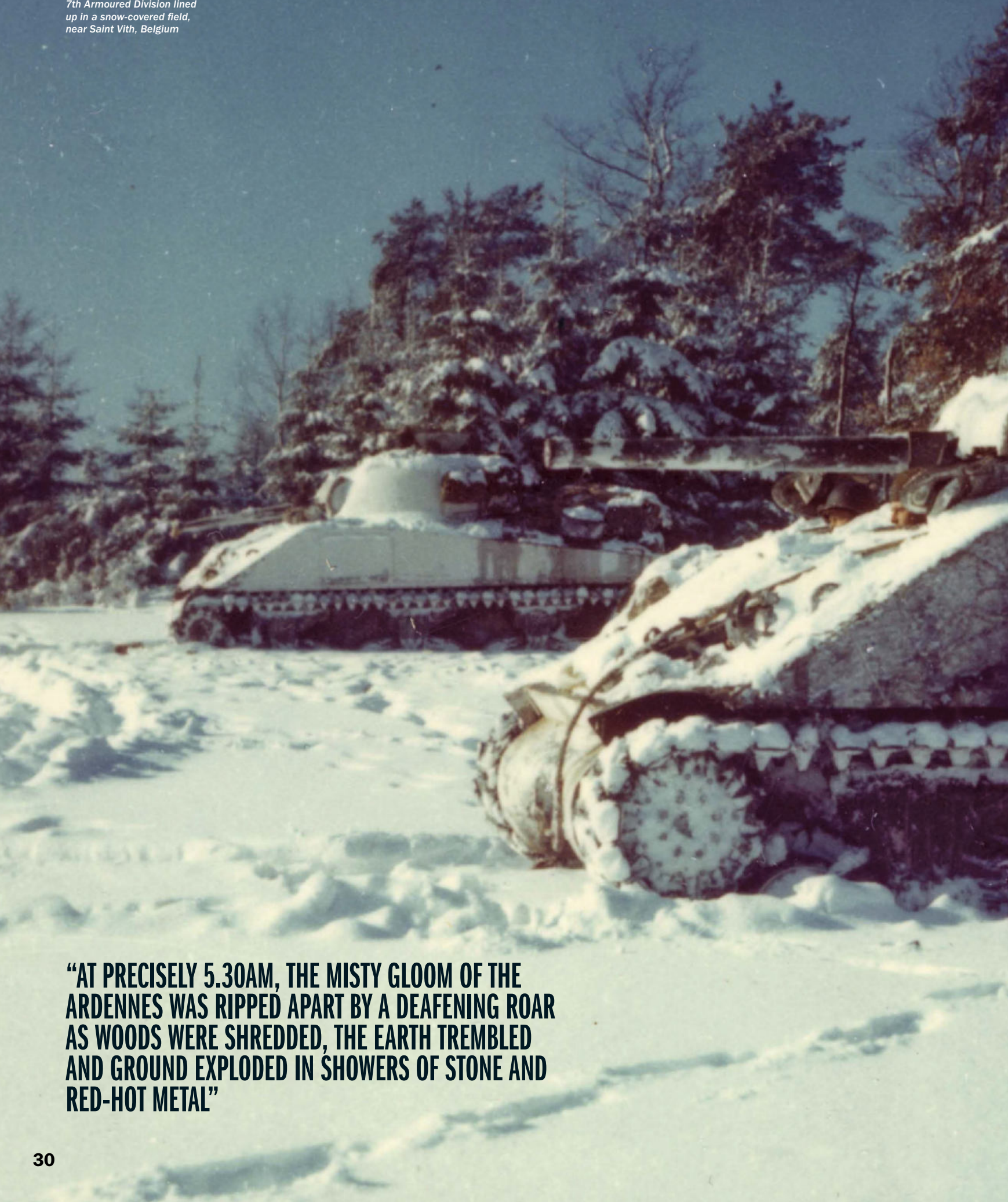
"MOST OF THE RANK AND FILE WERE THE VERY YOUNG – HITLER YOUTHS AGED AS YOUNG AS 16 – AND MUCH OLDER MEN WHO HAD SO FAR ESCAPED CONSCRIPTION"

Captured soldiers from the 12th SS Panzer Division of the Hitlerjugend

Inset above: General Sepp Dietrich (left) meets troops in January 1945

HITLER'S REVENGE

*M4 Sherman tanks of the
7th Armoured Division lined
up in a snow-covered field,
near Saint Vith, Belgium*



**“AT PRECISELY 5.30AM, THE MISTY GLOOM OF THE
ARDENNES WAS RIPPED APART BY A DEAFENING ROAR
AS WOODS WERE SHREDDED, THE EARTH TREMBLED
AND GROUND EXPLODED IN SHOWERS OF STONE AND
RED-HOT METAL”**



HITLER'S REVENGE

Market Garden gave him the inspiration to incorporate a parachute drop into the attack (the Germans had rarely descended into battle by air since Crete). A local attack by US forces using captured German equipment in the street fighting for Aachen also stirred his imagination sufficiently to summon his favourite SS commander to his HQ. Lieutenant Colonel Otto Skorzeny was instructed to recruit a unit of English-speaking commandos, who would – suitably attired in GI uniforms, driving US vehicles – penetrate American lines to cause mayhem and confusion.

The Führer had come to rely on the tall, scar-faced Skorzeny, a fellow Austrian, as a 'fixer' in times of crisis: in July 1943, he had rescued Mussolini from captivity in central Italy, while a year later he had helped crush the 20 July plot in central Berlin. The SS officer was very much a protégé of Hitler – an extremely capable charmer, a natural businessman and charismatic leader in his own right, who usually 'got things done', whatever the circumstances. He would also remain loyal to his boss and his ideals long after the war.

That Hitler took to him, seeing the light of a 'true believer' in his eyes, is obvious, because Skorzeny was one of the first to be told of the plans – even before the field marshals and army commanders who would eventually launch the attack. In retrospect, given the extensive modern use of special forces troops, it is surprising that Germany made little use of Skorzeny-type units: in this respect, the Germans actually fought a remarkably 'conventional' war.

The attack begins

There remains a debate as to how Herbstnebel ('Autumn Mist' – the final code name for the operation) came as a complete surprise to the Allies. It was partly the fault of the 'Happy Hypothesis', emanating from Eisenhower's

SHAEF headquarters that the German army was finished. Reflecting this spirit of optimism, units were encouraged to disregard tactical intelligence reports gained from aerial reconnaissance, signal intercepts, and prisoner and civilian interrogations that suggested the opposite. Strategic intelligence from Bletchley Park also dried up. As the Reich shrank, the need to send coded messages by the Enigma enciphering machine (which Bletchley could decipher) diminished. Instead, officer couriers hand delivered written orders. The warning signs were there, but they were buried among Enigma signals sent by Deutsche Reichsbahn (German railways) detailing troop and equipment moves towards the Ardennes, and Luftwaffe messages detailing the concentration of aircraft for a future mission – misinterpreted as a deployment of fighters against the Allied bombing fleets.

After several postponements, the blow eventually fell on 16 December, the date being decided by the onset of fog and snow in the battle area. This, in turn, was triggered by weather reports over the previous week from U-boats in the North Atlantic: Bletchley Park intercepted their signals, but attached no immediate significance to them.

At precisely 5.30am, the misty gloom of the Ardennes was ripped apart by a deafening roar as woods were shredded, the earth trembled and ground exploded in showers of stone and red-hot metal. GIs hunkered down



Above: Refugees evacuate past US troops in the town of Bastogne in December 1944

in their trenches, bunkers and commandeered houses, wondering what was happening, while every calibre of shell the Third Reich possessed was hurled at them. Headquarters, artillery positions and communications links were targeted, and soon, out of the darkness swarmed hundreds of Volksgrenadiers, who swiftly overwhelmed the forward positions.

Hitler had ordered that both the tank armies – Dietrich's Sixth and Manteuffel's Fifth – be preceded in their assaults by the Volksgrenadier divisions. This was in contrast to the advance of May 1940 over the same terrain, which had been spearheaded by armour, with the infantry plodding behind and mopping up. Back then, Rommel's Seventh Panzer Division had made it to the river Meuse in three days. The Führer's ambitious timetable called on his armies to achieve the same in two days – but in mid-winter amid appalling weather.

"HITLER PUSHED AHEAD WITH HIS PLANS, REJECTING OUT OF HAND ALL PROTESTS FROM HIS MILITARY STAFF TO SCALE DOWN OR CANCEL THE ASSAULT"



Traffic of the 87th Infantry Division in the woods of Wallerode, Belgium in January 1945



American soldiers in Wiltz, near Bastogne, in January 1945

THE MALMEDY MASSACRE



IN ONE OF THE BLOODY CAMPAIGN'S DARKEST MOMENTS, OUT OF FRUSTRATION, REVENGE, OR SIMPLY TO SPREAD FEAR, SS TROOPS OPEN FIRE ON 113 US POWs

Reaching the outskirts of Malmedy on the afternoon of 17 December, and surprising a US convoy, SS-Colonel Jochen Peiper's column captured the vehicles and shot their crews. In the infamous massacre, 113 surrendered GIs were gunned down, of whom 43 survived. Two journalists, Jack Belden from *Time Magazine* and Hal Boyle of Associated Press happened to be in the vicinity and immediately reported the outrage, which was circulated by the US First Army without censorship.

Why had this happened? Essentially, the SS troops had spent much of their war on the Eastern Front, where such massacres of Russian troops and civilians were common, even encouraged. Peiper had also briefed his men beforehand: "In the coming operation, the regiment will have the duty to attack recklessly... the coming mission will be the last

chance to win the war. The enemy must become totally crazed with fear that the SS are coming." Other, smaller massacres by Volksgrenadier units against GIs and civilians were recorded, too. The resultant publicity not only stiffened the Allied resolve to resist, but unleashed a trail of violence against captured Germans as the campaign degenerated into unmitigated horror in the snow-covered landscape.

Peiper's murderous actions were also a reaction to the Allied bombing of German cities, and possibly an expression of his own frustration that his Ardennes advance was so slow. He knew, as did his fellow commanders all along the front, that the Americans would eventually recover from the surprise of the assault, and concentrate their huge combat power against these warriors of the Reich.

Above: Jochen Peiper was eventually convicted of war crimes and imprisoned for 12 years

Bodies of Belgians, also massacred by the German military during its counter-offensive, await identification before burial



A corpse of a US soldier after the Malmedy Massacre



"THE ENEMY MUST BECOME TOTALLY CRAZED WITH FEAR THAT THE SS ARE COMING" SS-Colonel Jochen Peiper

The odds were against them from the start, as the Volksgrenadiers relied on horses (they took 50,000 to the Bulge) and their artillery was mostly of World War I vintage, or captured French or Russian stock. Their effectiveness was highly variable, and rested on the quality of their officers and the amount of training that each had received. Their chief weapon was surprise, along with the StG 44. The lightweight Sturmgewehr, with its signature curved magazine of 25 rounds, was the direct ancestor of the Kalashnikov AK-47. Capable of 500 rounds per minute, it was issued to the attacking Volksgrenadiers and increased their firepower to disguise their lack of numbers.

Charles MacDonald, a junior officer with the Second Division up in the north, remembered, "Stray bullets from the small-arms fight up ahead began to zing through the woods." Shortly afterwards, "A hail of fire which sounded like the crack of a thousand rifles echoed through the forest. There was no doubt now. My men could see the billed caps

of the approaching troops." What MacDonald described in his famous book, *Company Commander*, was the arrival of Volksgrenadiers with their StG 44s.

In the south, Erich Brandenberger's Seventh Army, with few bridging units, were held up trying to cross the water obstacles to their front and achieved few of their Day One objectives. Their opponents of the US Fourth Infantry Division (with reporter Ernest Hemingway in tow) held firm. In the centre, Manteuffel's tank units were similarly slowed by the inability of their engineers and Volksgrenadiers to negotiate a swift passage over the rivers to their front. Only on the Fifth Army's very northern flank, where they had high ground, rather than water, to cross, did his men keep up to schedule, eventually surrounding two regiments of the US 106th Division, east of Saint Vith.

To the north, Dietrich was immediately held up by spirited American opposition and poor road conditions – exactly as Manteuffel had predicted – and failed to make any significant

progress until 17 December. On that day, an armoured column belonging to his First SS Division burst out of the bottleneck, and leaving their infantry behind, thrust deep into American lines. SS-Colonel Jochen Peiper's unit would later that day take part in the slaughter of 70 surrendered GIs, in what became known as the Malmedy Massacre.

The trouble was that the landscape of the Ardennes worked against the attackers. Rapid movement was constrained to a few routes that ran east to west through key towns – Bastogne and Saint Vith among them. Control of these roads, and the settlements that sat astride each intersection, would prove vital to the defence of the region. The superior training the GIs received before arriving in Europe meant that the defence of each crossroads was a tactical template that most adopted, independently, throughout the Ardennes – and one that would ultimately stall the German advance. In May 1940, Belgian and French troops had relinquished control of these route

centres early in the battle, surrendering the initiative to their German foes – which explains the contrasting fortunes of defending the Ardennes between 1940 and 1944.

The landscape of forests, hills and deep valleys naturally isolated defender and attacker alike from their parent units. For many Americans, the battle was perceived as a local German attack, made in strength. One remarked that it was only on 18 December that, "We finally began to realise we were in a situation that was more than a local spoiling attack by the Wehrmacht," while another commented, "It was 20 December before we found out this was the Battle of the Bulge and we were in it."

In the south, Brandenberger's Seventh Army soon ground to a halt and dug in – which was their task. In the north, Peiper equally quickly ran out of routes, when US Army engineers, often from Lieutenant Colonel David E Pergrin's 291st Combat Engineer Battalion, blew a series of bridges that stalled his advance. Peiper's armoured column included a battalion of Tiger II ('King Tiger') tanks. At the time, Nazi cameramen, and model-makers since, have lingered over these panzers, which carried an 88mm gun and armour up to seven inches thick. No more than 50 were present in the Bulge (the main warhorse being the old Panzer IV) and at 70 tons, Tiger IIs were too heavy for most bridges, consumed nearly three gallons of fuel per mile, and were plagued with mechanical problems; Peiper would lose more to breakdown than enemy action. Contrary to the many myths that have grown around the Bulge, the SS commander so disliked these heavy tanks that he forced them to travel at the rear of his advance.

Resistance at Elsenborn Ridge, Saint Vith and Bastogne

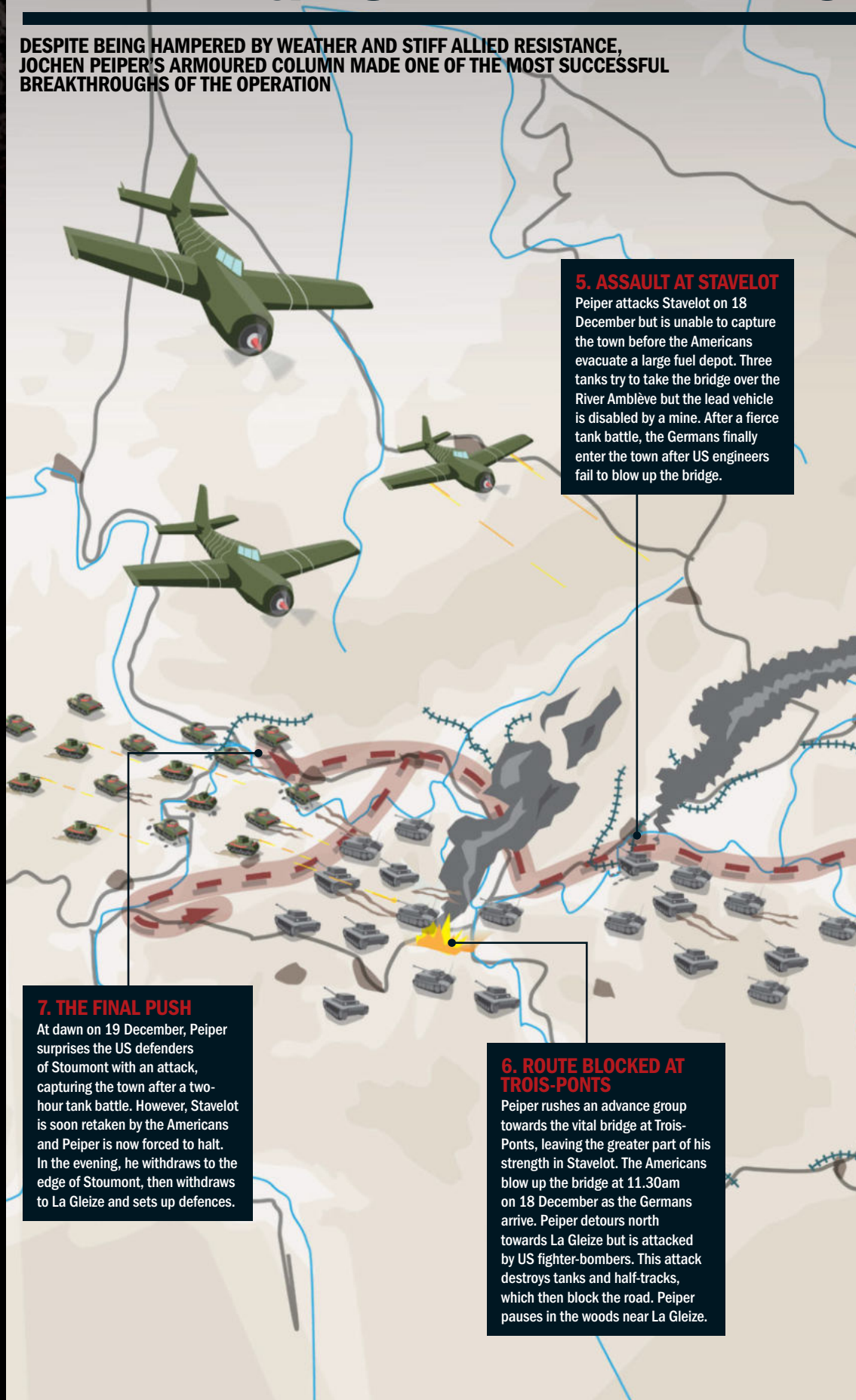
On Peiper's right, the 12th SS Panzer division soon came up against the high ground around Elsenborn, onto which Colonel von der Heydte's paratroopers had been dropped. With many scattered in the bad weather, or suffering injuries on landing, few had reached their rendezvous. They were soon rounded up or overwhelmed. By the time the 12th SS arrived at the Elsenborn Ridge, US commanders had amassed 23 artillery battalions on the high ground. It was the greatest concentration of artillery firepower in the European theatre ("more artillery than I thought existed in all of the army," remembered a passing GI), which broke up every German attack.

The defenders of Elsenborn and Saint Vith looked askance at the attention paid to Bastogne since the Battle of the Bulge ended. The town stole the media's attention, but the static battle for the northern sector of the battlefield was just as important, if less newsworthy. 'Stationary resistance' did not make newspaper headlines, although the US divisions in the north stood firm and repelled the Germans every time.

Skorzeny's commandos, clad in their GI uniforms, caused huge confusion behind the lines, out of all proportion to their numbers, but were soon recalled as the German advance stalled. However, they left behind thousands of trigger-happy nervous GIs, who undoubtedly

KAMPFGRUPPE PEIPER'S

DESPITE BEING HAMPERED BY WEATHER AND STIFF ALLIED RESISTANCE, JOCHEN PEIPER'S ARMOURD COLUMN MADE ONE OF THE MOST SUCCESSFUL BREAKTHROUGHS OF THE OPERATION



5. ASSAULT AT STAVELOT

Peiper attacks Stavelot on 18 December but is unable to capture the town before the Americans evacuate a large fuel depot. Three tanks try to take the bridge over the River Amblève but the lead vehicle is disabled by a mine. After a fierce tank battle, the Germans finally enter the town after US engineers fail to blow up the bridge.

7. THE FINAL PUSH

At dawn on 19 December, Peiper surprises the US defenders of Stoumont with an attack, capturing the town after a two-hour tank battle. However, Stavelot is soon retaken by the Americans and Peiper is now forced to halt. In the evening, he withdraws to the edge of Stoumont, then withdraws to La Gleize and sets up defences.

6. ROUTE BLOCKED AT TROIS-PONTS

Peiper rushes an advance group towards the vital bridge at Trois-Ponts, leaving the greater part of his strength in Stavelot. The Americans blow up the bridge at 11.30am on 18 December as the Germans arrive. Peiper detours north towards La Gleize but is attacked by US fighter-bombers. This attack destroys tanks and half-tracks, which then block the road. Peiper pauses in the woods near La Gleize.

TRAIL OF CHAOS

4. MASSACRE NEAR BAUGNEZ CROSSROADS

At 12.30pm on 17 December, Peiper encounters elements of the Seventh US Armoured Division between the hamlets of Baugnez and Malmedy. The Americans quickly surrender. However, incoming SS troops open fire on the prisoners, causing widespread panic. 113 POWs are gunned down although some manage to escape.

3. FLANKING SOUTH AT BÜLLINGEN

Peiper advances north west to Büllingen with a plan to eventually move west. However, he is unaware that if he turns directly north, he has an opportunity to flank and trap the entire Second and 99th US divisions. Instead, he turns south to detour around Hünningen.

1. A SHAKY START AT LANZERATH

On 16 December, two squads of 18 American troops fight a battalion of German paratroopers during a day-long confrontation. They inflict dozens of casualties on the Germans and bottle up the advance of the SS.

2. THE FUEL DUMP AT HONSFELD

Peiper enters Honsfeld and encounters one of the 99th Division's rest centres, filled with confused US troops. The Germans quickly capture portions of the 394th Infantry Regiment and destroy a number of armoured vehicles and units. Peiper also captures 50,000 gallons of American fuel for his vehicles.

shot many innocent Americans – perhaps five per cent of the total casualties on both sides were from friendly fire. A Volksgrenadier commander, Generalmajor Möhring, driving a captured Jeep, was killed by one of his own men in similar circumstances on 18 December.

The concept of 'the Bulge' into Allied lines (the 'Battle of the Bulge' phrase was coined by *United Press International* reporter Larry Newman on 30 December 1944) is really associated with the performance of Manteuffel's tank formations, which easily outperformed Dietrich's SS, as the Fifth Army's commander had predicted, having better terrain for his armour. Yet he was always behind his tight timetable, as every panzer unit was delayed by the poor equipment of bridging units and the inability of Volksgrenadiers to quickly subdue the route centres of Saint Vith and Bastogne. The latter housed General Troy Middleton's VIII Corps HQ; he left reluctantly, and only on receipt of insistent orders from his First Army commander.

Both towns attracted Manteuffel's forces like iron filings to a magnet. While he needed the roads through them, and deviating around could be costly in men and equipment, the Fifth Army lingered too long in fighting for both. Saint Vith fell a week into the campaign, on 23 December – its robust defence conducted by Brigadier-General Bruce C Clarke of the Seventh Armored Division, who in the process stripped nearly a week out of Manteuffel's timetable.

The Allies react

Eisenhower was in conference with General Omar Bradley in Paris when news of the Ardennes attacks trickled in throughout the 16th. It was only late in the evening that the pair realised they were faced with a full-scale offensive. While Omar Bradley, Ike's fellow student from West Point days and now commander of the US 12th Army Group (First

"BY THE END OF 1944, EISENHOWER HAD COMMITTED 38 ALLIED DIVISIONS TO THE BULGE, BUT THEN THE WEATHER WORSENE, ADDING TO THE MISERY OF FRIEND AND FOE ALIKE"

and Third Armies), attended to his forces, Eisenhower deployed his theatre reserves – the 82nd and 101st Airborne Divisions. They had just come out of the line and were enjoying some well-earned leave in Rheims, but soon found themselves on the road to the Bulge.

The 82nd were dispatched to the northern shoulder, and the 101st to Bastogne, which is how Major Dick Winters and 'Easy' Company of the 506th Parachute Infantry Regiment – the subjects of *Band Of Brothers* – came to find themselves in the freezing Bois Jacques woods just outside Bastogne. It was a close-run affair, as their arrival almost coincided with that of the tanks of the Panzer Lehr Division. The Germans were only an hour or two behind.

The parachutists were conveyed to their destinations by fleets of six-wheeled GMC trucks and semi-trailers. Military policemen literally rounded up any transport they could find, had their cargos emptied and sent them off to the airborne units. The men were crammed into the back standing up and moved immediately. Back in the autumn of 1944, when the Allies had outstripped their supply lines, they had improvised the 'Red Ball Express', a one-way continuous circuit of thousands of cargo trucks moving up to the front, which eventually solved their logistics problem. For the Bulge, they repeated the exercise; on 17 December alone, some 11,000 trucks were moving 60,000 men and their combat supplies towards the battle zone.

World War II had become a battle of trucks and fuel; First Army recorded it moved 48,000 vehicles to the Ardennes in the

opening week and Patton at Third Army noted that during the month-long battle, 17 of his divisions were shifted an average distance of 100 miles to various points in Belgium and Luxembourg. The Red Ball and Ardennes moves were only possible because of the USA's stupendous manufacturing capability. Once the US Quartermaster Corps had settled on its requirement for a medium 2.5-ton 6x6 truck, 800,000 had been assembled by 1945 – some by Studebaker and International Harvester, but more than 500,000 by the General Motors Corporation (GMC), leading to their inevitable nickname of 'Jimmies'.

The speedy arrival of the 101st Airborne at Bastogne, followed by a hotchpotch of other units, ensured that the Germans wouldn't take the town. Combat supplies and medical personnel parachuted in, or arrived by glider. Keen to press on westwards, towards the distant river Meuse, the Second Panzer Division swarmed around the northern perimeter, while Panzer Lehr trundled around Bastogne's southern limits; in so doing, they surrounded the little Belgian town and its famous siege began. So desperate were the attackers to seize the settlement that the local German general, Baron von Lüttwitz, sent a surrender demand to Bastogne's military commander, Brigadier General Tony McAuliffe of the 101st.

He tried to bluff the Americans into capitulation, although his forces were inferior in numbers and firepower to those of the defenders. All he achieved was a mysterious one-word reply, "Nuts!", which was McAuliffe's favourite word to express frustration. As one



Above: A fallen member of the 101st Airborne Division, killed while fighting in a heavily wooded area near Bastogne, Belgium

A US soldier returns from the frontline in the Bastogne region



US soldiers of the 289th Infantry Regiment march along the road on their way to cut off the Saint Vith-Houffalize road in Belgium, 24 January 1945

officer present later observed, this was a polite way of telling the Germans to "go to Hell". The siege was broken on 26 December in a dramatic dash by Lieutenant Colonel Creighton Adams's 37th Tank Battalion (of Patton's Third Army), although the corridor into the perimeter remained tenuous for several days.

The mist disperses

It was the Second Panzer Division that came closest to reaching the Meuse, when one of its battle groups reached Celles, about five kilometres from the river, on 23 December, but there ran out of fuel. On Christmas Day, the skies cleared, enabling US P-38s, P-51s and rocket-firing RAF Typhoons to pulverise the array of ground targets, easily identifiable in the snow-covered landscape. "A Flak battery that attempted to reply to an attack of P-38 Lightnings simply disappeared under a hail of bombs," noted the divisional war diary.

Allied airpower, of course, was always going to halt Herbstnebel, for the fog and snow wouldn't last indefinitely. The only question was when. In this sense, the end result of the Ardennes attack was inevitable: somewhere along the line of their advance, or even in Antwerp, the German war machine would be caught and destroyed by the Allied air fleets, to which they had no antidote.

Fuel was the other German headache, although the routes taken by the various German battle groups were not predicated on the need to capture US fuel dumps, as war movies would have us believe. Fifth Panzer Army managed to take several American dumps, but SS-Colonel Peiper actually missed capturing 3 million gallons of precious fuel that was stored in woods near Stavelot because he didn't know it was there. However, the Germans had gasoline available, but it wasn't in the right

Above: A Sixth Airborne Division sniper dressed in a snow camouflage suit while on patrol in the Ardennes region

place: kept on the home bank of the Rhine for security and deception purposes, once the attack was launched, the available fuel couldn't be brought forward fast enough, along poor routes, clogged with transport, prisoners, mud and slush. The winding roads and thick snow also increased fuel consumption beyond what had been expected, and ensured that petrol would become an increasing concern throughout the campaign.

Early on, Eisenhower had agreed – controversially for the Americans – to divide the Bulge area in two. The British 21st Army Group commander, Montgomery, was to oversee containment of the northern sector of the Bulge, then counter attack. Eisenhower made this decision because the Germans had physically isolated Bradley, the 12th Army Group commander based south of the German penetration in Luxembourg City, from the First US Army, based the other side of the Bulge. Hodges and his First Army thus came under 'Monty', while Bradley retained Patton's Third Army, to which Middleton's VIII Corps was also attached. Although Bradley to his dying day took this as a slur on his own generalship, those American generals who served under Monty at this time were generally positive about

his methods, if not his personality.

The scene was set for the final act in the Ardennes, with the panzer thrusts having culminated, and all German units generally low on fuel, food and ammunition. Meanwhile, General Brian Horrocks had slid elements of his British XXX Corps down along the river Meuse, to stop any Germans from moving further westwards – as if they could. It is often forgotten that Horrocks suffered 1,408 British casualties in this last stage of the fighting, his dead being buried at Hotton. By the end of 1944, Eisenhower had committed 38 Allied divisions to the Bulge, but then the weather worsened, adding to the misery of friend and foe alike. On New Year's Day, an artillery unit recorded temperatures of -11 degrees Celsius, but by 9 January, the mercury had plummeted to -21 degrees Celsius. At this time, Montgomery's forces began their attacks from the west and north, while Patton's Third Army responded likewise impatiently from the south.

By 14 January, the two American armies, Hodges' First advancing from the north and Patton's Third, made contact for the first time at La Roche, and two days later, substantial armoured units from both armies sealed the Bulge at Houffalize. Saint Vith was retaken on 23 January – by which time only three houses remained habitable; the campaign also took the lives of more than 3,000 civilians, maiming countless others. While the casualties for both sides were about even, very little of Hitler's divisions remained. The Allies noted the loss of 733 tanks, but the Wehrmacht had lost 600 irreplaceable panzers, which could have meted out much more severe punishment to the Red Army in their assault on Berlin later in the year. In this sense, the Russians were the true beneficiaries of Herbstnebel, a militarily illogical campaign devised solely by Hitler, and doomed to failure before it had even begun.



An American soldier guards German prisoners

Images: Alamy

Great Battles

BANNOCKBURN

Using the terrain to their advantage, Scottish spearmen face an overconfident, poorly led English army marching to relieve Stirling Castle

WORDS WILLIAM E WELSH

The Scots drive their foe into the waters of the Bannockburn after panic gripped the English host on the second day of battle



SOUTHEAST SCOTLAND, 23-24 JUNE 1314

Dawn had only just begun to break on the morning of 24 June as a wall of Scottish pikemen advanced in force across the dewy ground, their weapons pointed threateningly in the direction of the invading enemy. Halting, they formed a seemingly impenetrable barricade of men and arms, bristling with sharp iron points. Though they had heard they were outnumbered, the king of Scotland's men were resolute – they knew that victory on this day could form a turning point for the future of their country.

The Battle of Bannockburn stands as the greatest triumph of Scottish arms over an

English army during the First War of Scottish Independence. King Robert I masterminded the decisive defeat of a substantially larger English force under Edward II, whose objective was to raise the siege of English-held Stirling Castle.

At first glance, the clash between the mighty host of England, with its well-equipped heavy cavalry and veteran infantry, against a hastily mustered peasant army of much smaller Scotland might seem an uneven contest heavily favouring the English. However, Robert the Bruce was able to tip the odds in the favour of the Scots by repeated drilling of his infantry, his intimate knowledge of the local terrain, and the use of innovative tactics. These factors,

OPPOSING FORCES



**ENGLAND
LEADERS**

King Edward II
Gilbert de Clare
Humphrey de Bohun
INFANTRY 14,000
CAVALRY 2,000
ARCHERS 2,000

VS



**SCOTLAND
LEADERS**

Robert the Bruce
Thomas Randolph
Edward Bruce
INFANTRY 6,000
LIGHT CAVALRY 500



together with the tactical incompetence of Edward II, combined to effectively blunt the force of the English attack and create a stunning military upset.

Throughout most of the 13th century, the monarchies of England and Scotland had been on amiable terms. That indispensable ingredient of Medieval diplomacy – intermarriage – had ensured that the two peoples got along well. What's more, the Scottish nobility saw peace as particularly important to them because they held feudal lands on both sides of the border.

All of this came to a crashing end, though, when Scottish King Alexander III fell from his horse and broke his neck in 1286, precipitating a succession crisis. The leading claimants to the throne were John Balliol and Robert the Bruce. The shrewd English King Edward I was asked to mediate and ruled in favour of Balliol in 1292 on the condition that he acknowledged Edward's right as an overlord.

The Scots were not keen on going to war with Edward, whose armies were among the best in Europe, but they believed Edward had concocted his right as overlord, as they could find no precedent for it. Edward was furious and began interfering in Scottish affairs. The Scots, in response, made an alliance with France in 1295, designed to curb English aggression.

Edward's chief lieutenant, John de Warrenne, led the English heavy cavalry to a victory over their Scottish counterparts at the Battle of Dunbar on 27 April 1296. Edward deposed John Balliol, hauled away the sacred Scottish coronation stone and locked up most of the Scottish nobility.

“EDWARD VOWED TO CRUSH BRUCE AS HE HAD WALLACE BEFORE HIM. FORTUNATELY FOR BRUCE, THE AGING KING DIED EN ROUTE TO SCOTLAND”

These were bitter pills for the Scots to swallow, and patriot William Wallace emerged during the ensuing power vacuum. The younger son of a knight, Wallace ably led the Scots to victory against Edward's inept deputies at the Battle of Stirling Bridge in September 1297. Edward marched north the following year and led a combined arms force to victory against Wallace at Falkirk in July 1298.

Wallace had been the de facto leader of the Scottish rebellion, but following Falkirk he resigned the guardianship, after which he faded into the background until he was betrayed to the English. Edward had him put to death in 1305. Perhaps Scotland's best hope lay in Bruce, Lord of Annandale, but he had pledged his fealty to Edward in 1302.

Bruce had a change of heart about taking the throne after he murdered rival John Comyn in a fit of rage during a February 1306 meeting at Greyfriars' church in Dumfries. With the support of some of his fellow nobles, Bruce was crowned king of Scotland on 25 March 1306. Edward vowed to crush Bruce as he had Wallace before him. Fortunately for Bruce, the aging king died en route to Scotland. The task fell to his son, Edward of Caernarfon, to subdue the rebellious Scots.

Bruce at once set about retaking Scottish castles from the English. By the end of March

1314, the Scots had regained all of the English-held castles except Bothwell, Dunbar, and Stirling. The English had captured Stirling Castle, which controlled the bridge over the river Forth, during a three-month siege in 1304. Bruce, who was campaigning in western Scotland in 1313, ordered his brother Edward to retake it.

A shrewd deal

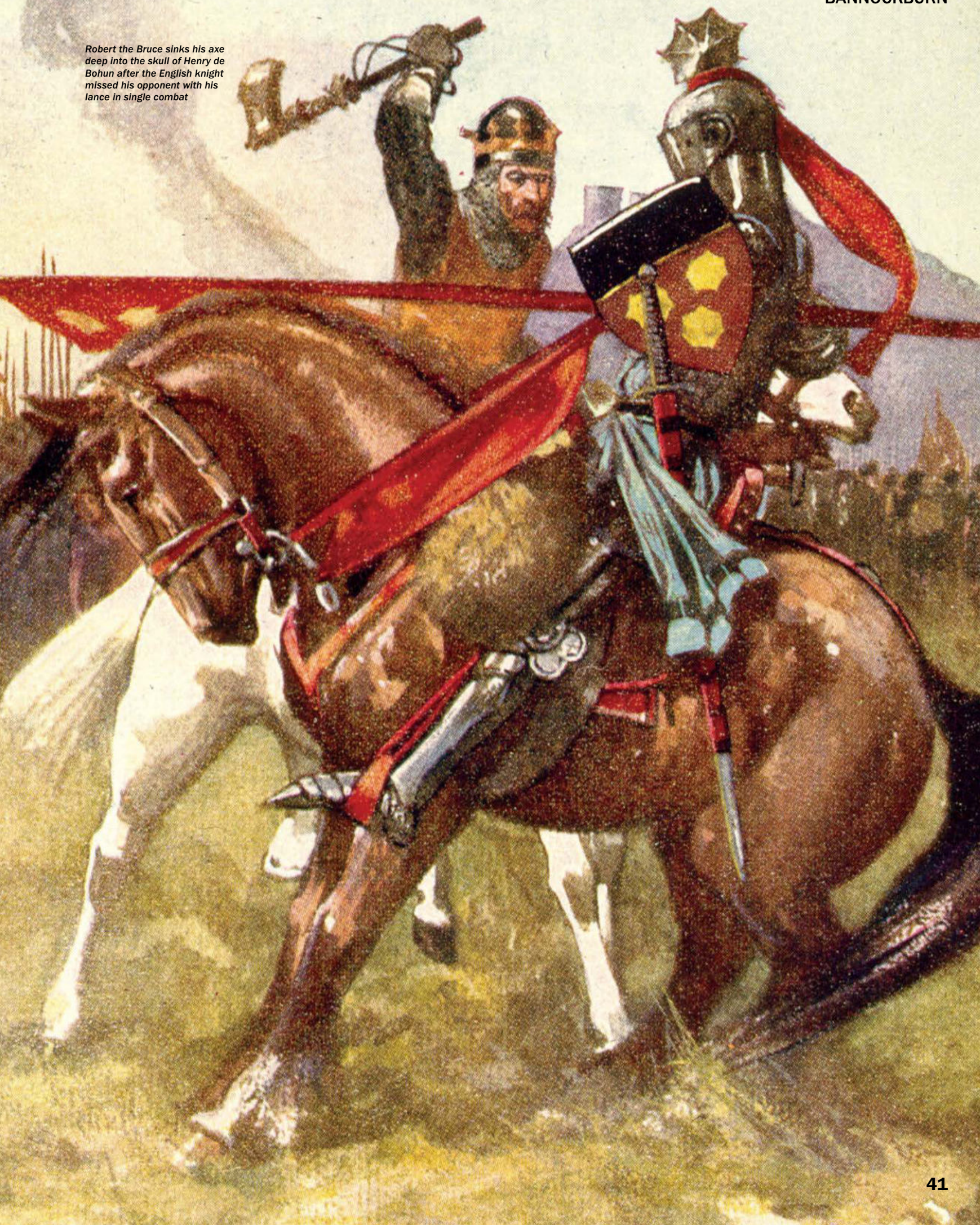
Lacking siege engines, Edward Bruce had no choice but to starve Stirling Castle's garrison into submission. Sir Philip Mowbray, a Scotsman who remained loyal to Edward II, served as the castellan. He proposed to Edward Bruce in summer 1313 that if an English army had not arrived to within three leagues of the castle by 24 June 1314, then he would surrender the fortress. Edward agreed to the deal. It was a shrewd move on the part of Mowbray, because it bought Edward II a full year to raise the siege.

King Edward issued writs of summons to 87 barons with instructions that they should furnish troops that were to assemble at Berwick in May 1314. Only a few English earls agreed to personally participate in the campaign. These were Gilbert de Clare (Earl of Gloucester), Humphrey de Bohun (Earl of Hereford), and Aymer de Valence (Earl of Pembroke). The king



Scottish King Robert the Bruce gives a rousing speech to his troops on the morning of 24 June before the pitched battle on the second day

Robert the Bruce sinks his axe deep into the skull of Henry de Bohun after the English knight missed his opponent with his lance in single combat



made his nephew de Clare co-commander of the English vanguard along with de Bohun and appointed de Clare constable of England for the campaign. De Bohun, who had much more experience and was the constable by hereditary right, seethed over the matter in the days leading up to the battle.

When word reached the English monarch that Scottish units were deployed in marshlands where it would be difficult for heavy cavalry to operate, he sent a letter directly to his sheriffs advising them of the need for as many foot soldiers as they could send. Ultimately, the English mustered 14,000 billmen, 2,000 archers and 2,000 cavalry. Parliament did not issue a formal summons for the feudal host, and therefore it is impossible to know the precise number of knights and squires who participated. After reporting to Berwick, the units moved into bivouacs west of the city on the south bank of the River Tyne.

Bruce began assembling his army six kilometres south of Stirling Castle at Torwood in mid May. He and his captains drilled their 6,000 spearmen repeatedly to raise morale and ensure they would work well together when they went into battle.

The Scottish infantry carried four-metre-long pikes, which they used in a versatile fashion both as an offensive and defensive weapon. In the case of the latter, which was used primarily when defending against cavalry, the Scottish spearmen formed themselves into a circle known as a schiltron with their menacing iron tips facing out in all directions. If cavalry pierced the schiltron, the Scots used axes and swords to hack their foe to death.

The English troops crossed the Tyne at Wark and Coldstream on 17 June. De Clare led the mounted vanguard; the infantry that constituted the bulk of the main and rear guards tramped slowly behind. At sunset on 22 June, the English vanguard arrived in Falkirk. When Bruce learned that the English were nearby, he ordered his forces to fall back two kilometres to the New Park, a hunting preserve for the lord of Stirling Castle. The wooded tract was situated on the eastern edge of an escarpment that ended a short distance from the Carse of Balquhiderock, a low-lying, tidal marshland on the north side of a narrow stream known as the Bannockburn. A dry field separated the wooded escarpment from the carse.

Bruce knew that the sprawling marshland would hamper operations of the English heavy cavalry. The Scottish infantry was divided into three battles, or divisions. For marching purposes, Bruce led the vanguard,

A statue of Robert the Bruce watches over the battlefield where he and his spearmen secured their legacy in the annals of Medieval warfare



Great Battles

BANNOCKBURN

23-24 JUNE 1314

06 **Small folk join advance**
When it is evident to the Scottish "small folk" guarding the army's baggage that the spearmen are winning the battle, they rush behind the army shouting "kill them! On them!" The English infantry mistakenly believes these are reinforcements, and wholesale panic ensues.

04 **Scots offer battle**
The Scots advance shortly after daybreak on 24 June from the wooded New Park. Edward Bruce's division forms the right wing, and the Earl of Moray's division the left wing. Robert the Bruce's infantry serve as the reserve with the cavalry brigades of Robert Keith and James Douglas stationed on his left and right, respectively.

08 **Go away, Edward!**
King Edward and his retainers arrive at Stirling Castle late on the morning of 24 June requesting admittance. Castellan Philip Mowbray refuses to admit him, stating that the castle is in imminent danger of falling to the victorious Scots.

01 **Prelude to single combat**
On the afternoon of 23 June, Sir Humphrey de Bohun leads a mixed force of cavalry and archers across the Bannockburn against the Scottish rearguard. The Scots go to great lengths to draw the English toward the New Park so that the enemy does not discover the vast field of concealed pits on both sides of the Roman Road designed to thwart a large-scale cavalry attack.

05 English struggle with attack

The three English divisions line up one behind another facing west on the Carse of Balquhiderock at daybreak on 24 June. The majority of the troops are in the first two divisions. Edward commands a rearguard that includes his devoutly loyal household troops.

02 Flanking force rides north

Baron Robert Clifford and Sir Henry Beaumont lead 300 heavy cavalry along the western edge of the Carse of Balquhiderock to cut off what they mistakenly believe is the retreat of the Scots from the vicinity of Stirling Castle. Unsure of their exact purpose, Robert the Bruce orders Thomas Randolph, Earl of Moray, to prevent them from making contact with the castle garrison.

07 D'Argentan's suicidal charge

After King Edward and household knights have left the battlefield, one of the most renowned living knights, Sir Giles d'Argentan, charges Edward Bruce's schiltrons single-handedly with couched lance. He is killed in the forlorn attack.

03 Pioneers build foot bridges

The English main force and rearguard arrive at the battlefield via a secondary road to the east known as 'The Way'. To facilitate the crossing of the entire army that evening, pioneers strip roofing material and doors from local houses that they use to build makeshift bridges.

King Robert the Bruce is today remembered in Scotland as a national hero



Edward Bruce led the mainguard, and Thomas Randolph, Earl of Moray, led the rearguard. The Scottish army countermarched to the New Park on 22 June with Moray leading the column and Bruce bringing up the rear. The two cavalry brigades, one of which was led by Sir Robert Keith and the other by Lord James Douglas, guarded the column's flanks.

Quest for personal glory

Bruce set the Scots to work immediately digging hundreds of shallow pits along both sides of the Roman Road on the north side of the Bannockburn. The Scots dug one-foot-wide, three-foot-deep holes that they covered with grass and brush. The pits were intended to disrupt an English cavalry attack – when a horse stepped into the pit both horse and rider would crash to the ground.

On the morning of 23 June, the Scottish vanguard advanced up the road toward the Bannockburn crossing. When he spied movement to the west on the north side of the Bannockburn, de Clare dispatched de Bohun with a small force of cavalry and archers to engage the Scots. While the two forces drew near, Humphrey's nephew, Henry de Bohun, spied Bruce riding on a palfrey near the tree line. The glory-seeking English knight spurred his horse, lowered his lance, and rode to engage Bruce. Just before Henry's lance hit home, Bruce turned his horse, causing Henry to miss him. Bruce then stood in his stirrups on his short horse and swung his axe. The force of the blow penetrated both helmet and skull, snapping the shaft of the king's axe in the process. Henry fell lifeless to the ground.

De Clare, who mistakenly assumed that the Scots might be retreating further north, ordered

Baron Robert Clifford and Henry Beaumont to lead 300 cavalry on a wide flanking march to cut off the Scottish retreat. Moray deployed his division to engage the English flankers. The Scots formed a schiltrons with their pikes protruding outward. Clifford gave the order to attack, and the English in the front charged with couched lances against the spear formation. Lances and spears clacked loudly together on contact. Many of the English were unhorsed in the charge. The English cavalry lapped around the schiltrons the way eager flames wrap around a fire log. Despite their courageous attack, the armoured horsemen could not break the wall of spears. Neither side suffered any appreciable casualties. After a short time, Clifford ordered a general withdrawal.

That night, the English army slept on its arms in the low-lying ground in the V formed by the confluence of the Pelstream and Bannockburn. It was "an evil, deep, wet marsh," wrote Thomas Gray, who was present at the battle. "The English army unharnessed and remained all night having lost confidence and being too much disaffected by the events of the day."

Neither side got much rest that evening, as the night was only five hours long. With some of his troops still arriving from the south, Edward held a council of war with his earls. Some suggested he wait a day to see if the Scots withdrew, as the terrain favoured the enemy. Besides, they said, the relief army already had arrived to within three leagues of the castle, which meant the Stirling garrison would not have to surrender. Edward overruled them, as he did not want the Scots to escape.

Bruce had been considering a withdrawal to the Lennox district. But when Sir Alexander Seton defected to the Scottish side during the



night, he informed Bruce that the morale of the English was extremely low. Based on that information, Bruce decided to give battle.

"A thick-set hedge"

On the day of the battle, King Edward remained confident in the supremacy of his arms; he fully expected to crush the Scots that day.

The constant drilling in the preceding days undoubtedly paid off for the Scots. "They advanced like a thick-set hedge, and such a phalanx could not easily be broken," wrote the anonymous author of the *Vita Edwardi Secundi*.

Although the *Lanercost Chronicle* mentions a brief archery duel in which the English outmatched the Scots, this is not supported by other contemporary sources. The English rushed to get ready for battle. Once his cavalry was assembled, de Clare led them forward at a trot. The heavily armoured horsemen on their mighty destriers gained speed when they rode onto a dry field between the carse and the forest. Fortunately for the English, the cavalry traps were arrayed for an enemy attack from the south, and therefore they did not impede their advance.

The English cavalry recoiled before the impenetrable wall of iron-tipped spears. The narrow front over which they were attacking prohibited, at least initially, their deploying any archers on the wings. With no infantry or

"THE FORCE OF THE BLOW PENETRATED BOTH HELMET AND SKULL, SNAPPING THE SHAFT OF THE KING'S AXE IN THE PROCESS. HENRY FELL LIFELESS TO THE GROUND"



archers advancing with them, the cavalry simply could not inflict enough casualties in the tightly packed ranks of spearmen to create gaps that they could exploit.

The English steeds generally shied away from the sharp points, but some knights were able to get their destriers to ride straight onto the spear tips. The mighty beasts screamed in agony as they were disembowelled by multiple spears. Some knights resorted to hacking at the spear shafts with their swords or axes, while others hurled their edged weapons into the tight ranks hoping to kill enough of the enemy to create a gap they might penetrate.

Those knights that somehow found a way inside the spear rings were surrounded by the enemy, hauled from their saddles, and hacked to death by axe-wielding Scotsmen. De Clare quickly became separated from his household knights, so the Scots unhorsed and killed him.

The English longbowmen initially tried to shoot over the attacking cavalry, but this proved unfeasible. Although it is unclear who issued the order, a large group of English and Welsh archers forded the Pelstream and began showering the left flank of Moray's division with arrows. Seeing the threat, Bruce ordered Keith's cavalry to drive off the English. When the Scottish horse charged, the archers fled. If the Scottish cavalry had not undertaken such prompt action, the course of the battle might

have been altered. Their archers' volleys were "so fast that if their shooting had persisted it would have gone hard for the Scots," wrote Scottish chronicler John Barbour.

The English cavalry eventually broke off its attack, and the survivors retreated east through the infantry. The English infantry appeared not as well-led units but as one large mass milling about without clear orders. The confusion of the battlefield, combined with the soggy ground on which the infantry was deployed, worked against a follow-on attack.

Sensing the English army was nearing its breaking point, Bruce ordered a counterattack. The schiltrons advanced with the men maintaining their tight formations. The Scottish captains shouted "push! Push! Push!" to maintain unyielding pressure on the floundering English ranks. Brave English billmen hacked futilely at the spear walls in a vain effort to buy time. The sound of contact made by hundreds of wooden shafts crackled through the air as spearmen and billmen battled in a test of strength. The Scots steadily drove the English from the dry field back into the close confines of the carse. Many of the English slipped in the muck and gore and were trampled to death as the Scots drove them back.

Edward, watching in shock as his army gradually unravelled before his eyes, attempted to ride forward to rally his troops. Pembroke

Above: English knights fail to penetrate the tightly packed ranks of the Scottish schiltrons. King Edward and his lieutenants made a critical mistake when they failed to send archers and infantry forward with the cavalry

and Sir Giles d'Argentan led the king away from the battle. They admonished him to escape as quickly as possible with his household guard to avoid capture or death. "Off he went, though much against the grain," wrote Gray. The royal party struck north for Stirling Castle. It was an ignominious end for the king who had been confident of total victory only hours before.

Scotland victorious

Bruce's superb leadership and skilled use of terrain directly contributed to the Scottish victory. Edward and his lieutenants were overconfident and lax. They not only failed to reconnoitre the terrain, but made no concerted effort to use their archers to weaken the schiltrons before or during the climactic action on the morning of the second day. The Scots were well fed and rested, and this contributed to their superb performance on the second day. The English were hungry, exhausted, wet and sleep deprived on the day of the main battle.

The Scots captured Stirling Castle on 20 July, but it would be 14 more years before they won formal recognition of their independence from England through the Treaty of Edinburgh-Northampton on 17 March 1328.

military might OF THE MONGOLS

WORDS DAVID SMITH

Feared as devils, or the descendants of mythical giants, the Mongols' strength was actually based on familiar principles of military success

At their height, the Mongols controlled an empire that dwarfed that of the Romans, yet before erupting from the eastern steppes in the 13th century, they were just one of many nomadic tribes in the region, and their main concern was finding adequate grazing for their sheep, goats and horses. How these hardy but independent tribesmen came to take on the might of China, Japan and even Europe is one of the greatest stories in military history. It is a story that has slipped into cliché and caricature because, unusually, it was not the victors who wrote the history. Instead, it was the shocked and traumatised nations that fell under the onslaught that recorded the events, and the Medieval European imagination, starved of hard data about the wider world, was all too ready to dream up stories of dog-headed men and mounted demons.

The intentions of these early chroniclers were often to belittle the Mongols' staggering

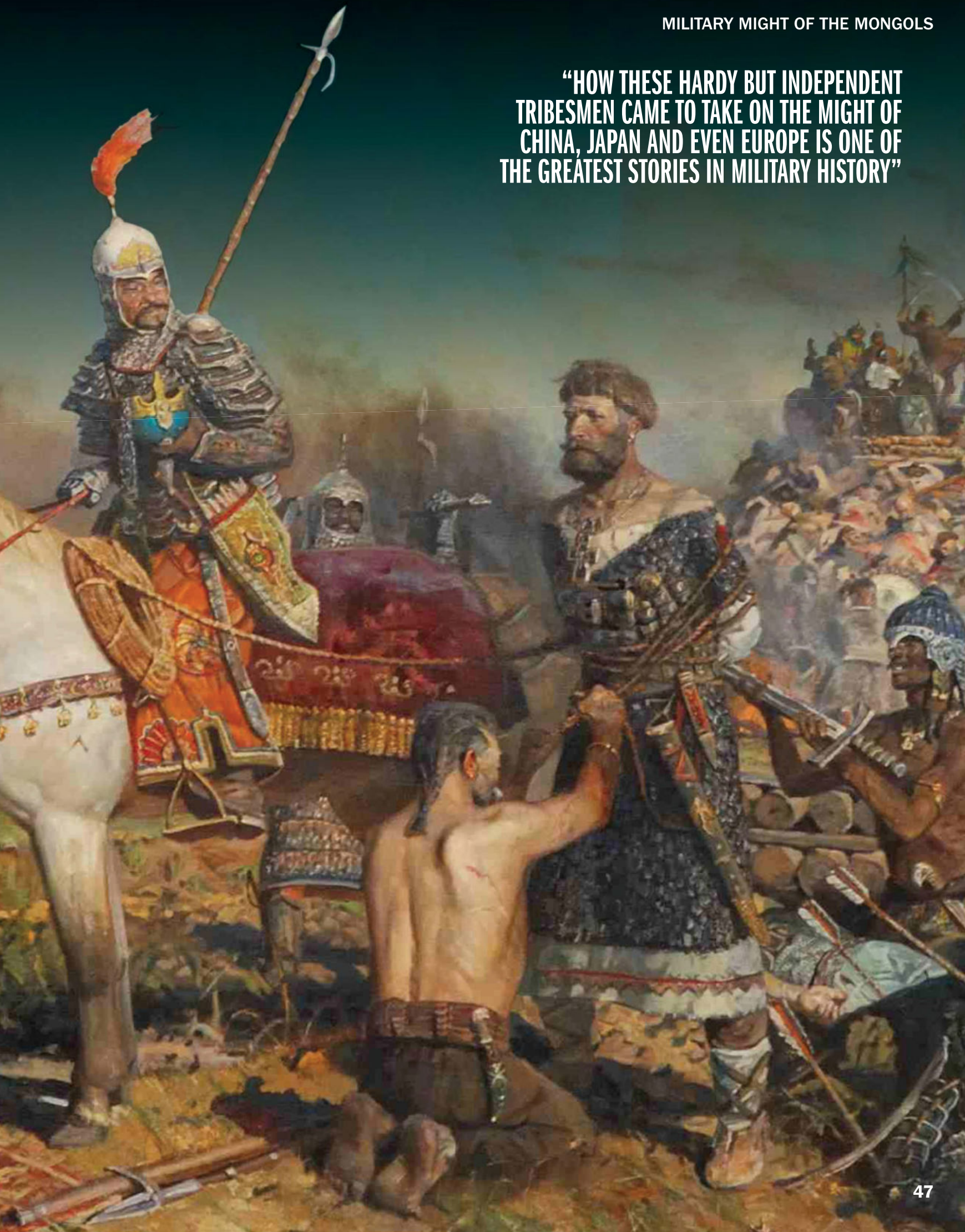
achievements. Their successes were attributed to overwhelming numbers, their strategic withdrawals recast as defeats and they were ultimately written off as unspeakably cruel, inhuman barbarians.

Eyewitnesses were able to offer more substantiated and down-to-earth assessments of the Mongols. The Persian historian Ala-ad-Din Ata-Malik Juvaini, who spent years living with the Mongols, remarked of their army: "It is an army after the fashion of a peasantry... It is also a peasantry in the guise of an army."

The truth is that the Mongols had built one of the most formidable war machines the world has ever seen, and this could not have been done by mindless barbarians. The secrets to the Mongols' success lay not in their savagery, but in the same qualities that have underpinned any successful military force throughout history: training, weapons, tactics, strategy, mobility and discipline.

Prince Mstislav of Kiev is restrained by his Mongol captors after the Battle of the Kalka River, 1223

**“HOW THESE HARDY BUT INDEPENDENT
TRIBESMEN CAME TO TAKE ON THE MIGHT OF
CHINA, JAPAN AND EVEN EUROPE IS ONE OF
THE GREATEST STORIES IN MILITARY HISTORY”**



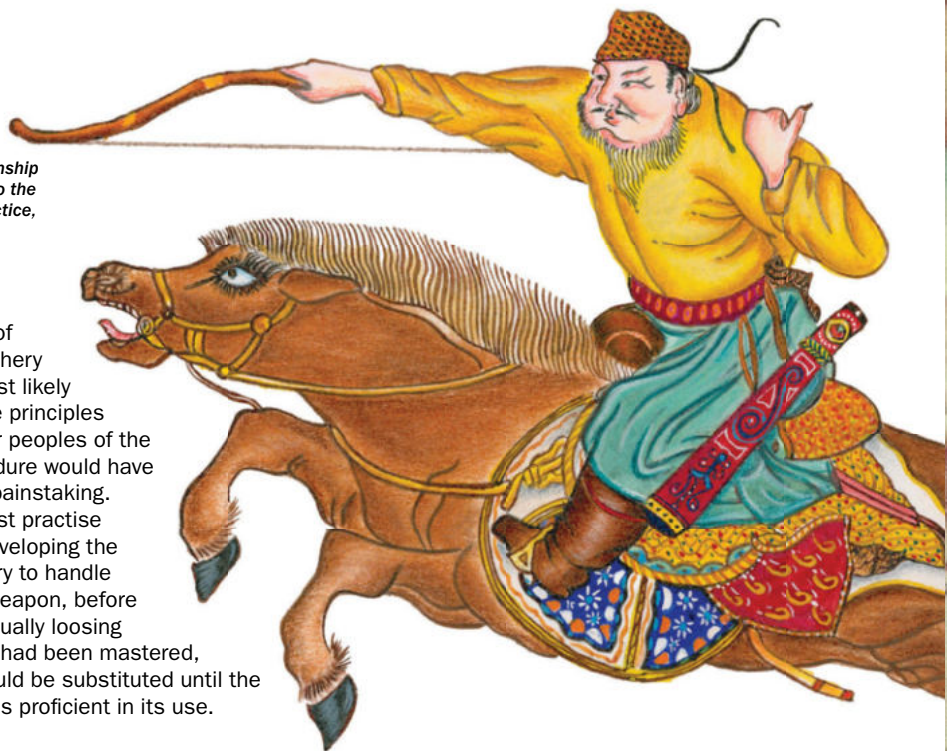
SKILLS

The life of a Mongol tribesman was an extended form of military training. In fact, the Mongolian language has no native word for 'soldier' – almost all men over the age of 15 were expected to serve in the armed forces if called upon, without question.

Legend tells that Mongol men learned to ride before they could walk. Myth took this further, suggesting that they became so used to riding on horseback that they had great difficulty walking on the ground.

The truth was rather more prosaic – children were indeed taught to ride from a very early age, but not at the expense of walking. Their first mounts were most likely sheep (with the obvious benefit of a much shorter journey to the ground if they fell off). Once seated securely on a horse, however, the young Mongol boys would start to learn the skills of the hunt, or *nerge*, becoming expert bowmen and tireless riders.

Right: Good horsemanship was central not only to the Mongols' military practice, but also their culture



Little is known of formal Mongol archery training, but it most likely followed the same principles employed by other peoples of the region. The procedure would have been logical and painstaking. A warrior would first practise drawing a bow, developing the strength necessary to handle such a powerful weapon, before progressing to actually loosing arrows. Once this had been mastered, stronger bows would be substituted until the Mongol warrior was proficient in its use.

"ALMOST ALL MEN OVER THE AGE OF 15 WERE EXPECTED TO SERVE IN THE ARMED FORCES IF CALLED UPON"

Left: Though he wasn't born a Mongol, Subutai became one of Genghis Khan's most feared generals



WRATH OF THE KHANS

THE GREATEST GENERAL IN THE HISTORY OF THE MONGOL EMPIRE, SUBUTAI BAGHATUR (SUBUTAI THE VALIANT), WASN'T EVEN A MONGOL

Subutai (or Subedei) overcame humble origins to become the greatest of all Mongol generals. The son of a blacksmith and one of the 'Reindeer People', he was not technically a Mongol at all. In fact, Genghis Khan launched a military operation to bring the Reindeer People, and other forest dwellers like them, under his control.

Subutai therefore did not have the traditional Mongol upbringing. His people rode reindeer rather than horses and lived in permanent villages rather than moving their herds around the vast steppes.

A blacksmith would have been valued by the Mongols, who had developed no technology of their own and so relied on foreign skills and materials to provide them with weapons. The young Subutai, however, had shown no inclination to take up his father's trade. Quite how he developed such a mastery of warfare, particularly on the steppe lands that were so alien to his native land, is impossible to know. It is likely that he had never even sat on a horse when he joined the small army of Temujin (Genghis Khan's original name).

It seems likely that Subutai was simply a natural when it came to tactical and strategic thinking, and

he had a gift for employing that thinking on a vast scale. Allied with this was a willingness to absorb technology and ideas from others. This was most notable in his use of siege weaponry and his willingness to employ it on the battlefield (it was Subutai's idea to implement the rolling barrage that cleared the bridge over the Sajo).

As well as natural ability, however, Subutai was the beneficiary of a remarkable form of military training. As a young man he acted as 'doorkeeper of the tent' for Temujin as he built his power base in the last decade of the 12th century. Thanks to this privileged position, he would have been able to listen in on countless councils of war, learning how generals thought and planned and no doubt making his own mind up about what was and wasn't effective.

Subutai's crowning glory was his majestic plan to invade eastern Europe, splitting the Mongol army across a vast front while continuing to maintain effective communications between the different corps. It was warfare on a scale the Europeans had never seen before and they were completely unable to offer an effective response.

A depiction of Genghis Khan, who carved out the Mongol Empire with ruthless and innovative military strategy



STRATEGY



There was little strategy in early Mongolian expeditions. Seeing wealthy neighbours as little more than supply stations to be plundered at will, the Mongols had no interest in actually conquering another nation.

This changed, for unknown reasons, during a raid into China in 1211, when Jin forces fielded a large army to resist the Mongols' predations. Genghis Khan, faced with this 70,000-strong

army, could have simply withdrawn into his homelands as countless raiding expeditions before had done, but on this occasion he chose battle and annihilated the Jin force.

Any thoughts of complete conquest were still hampered by the Mongols' inability to cope with large, fortified cities, but this gradually changed as expertise and equipment was absorbed from Jin territory. Eventually, the Mongols developed excellent siege tactics, which in turn allowed them to take on larger strategic goals.

During the campaign against Hungary, which started in 1241, the Mongols were able to split their army across a front of more than 1,000 kilometres, while retaining cohesion and co-operation. The dispersal of force (including a diversionary thrust into Poland) allowed the

Mongols to keep potential reinforcements from coming to the aid of the primary target.

Such large-scale, co-ordinated movements required high levels of organisation, and this was where Mongol training and discipline came into play. The army was split into units of ten, 100, 1,000 and 10,000, and a sophisticated and well-drilled system of flags, torches and messengers would ensure that communication between the units was continuous.

This was perhaps the biggest advantage enjoyed by the Mongols during their invasion of Europe. European military organisation was rudimentary at best, with the key element, the mounted knights, more adept at individualistic skills. There was no command and control system to bring a force together as a unified whole and this made them extremely vulnerable to the tactics employed by the Mongols.

The situation was worsened by the nature of the European armies that faced the Mongols, riven as they often were by personal feuds and political divisions.

Below: The Battle of Legnica, April 1241



"THE MONGOLS WERE ABLE TO SPLIT THEIR ARMY ACROSS A FRONT OF MORE THAN 1,000 KILOMETRES"

WEAPONS



The Mongols' most famed weapon was the bow, but their arsenal was varied and expanded steadily during their ascendancy. Just as the Mongols were willing to take on foreign knowledge and expertise (as in the case of siegecraft) they were also happy to adopt foreign weaponry.

Not only did they take on weapons such as catapults from China and other artillery from Persia, they were able to adapt them to their needs. Combining elements of both Chinese and Persian designs, the Mongols developed a catapult with a range of 350 metres. Explosives, naphtha and rocks would all be used as ammunition, and at the Sajo River in Hungary in 1241, the Mongols were able to employ a rolling barrage of artillery fire to enable them to cross a narrow bridge to get at the main army of King Bela.

FIRE LANCE

The fire lance, the precursor of the gun, was a perfect example of the Mongols' willingness to adopt foreign technology. At the siege of Kaifeng in China in 1232, they had been terrified by this strange weapon, which spouted fire up to nine metres from the end of a spear. Invented by the Chinese, it was originally a form of flamethrower, able to keep an enemy at a distance, but it also had a significant psychological impact upon enemy soldiers, especially those who had not encountered one before.

Initially, it was little more than a roman candle-style firework, constructed of bamboo or even paper and attached to a spear (once the fire had burnt out, the lance could be quickly converted back into a regular spear or pike). As it developed, however, the principle elements of what would later become firearms appeared, including the replacement of the bamboo barrel with one made of metal, which could withstand the use of more powerful gunpowder.

RANGE

As the fire lance developed, range improved from just a few feet to nine metres or more.

The lance was also able to be stuffed with pieces of stone or scraps of metal, which would be hurled from the end at the enemy like primitive bullets. With the realisation that larger projectiles, which fit snugly into the barrel of the fire lance, would enable more of the explosive power of the gunpowder to hurl them forth, a crude firearm was born.

By 1233, less than a year after first encountering them, the Mongols were carrying fire lances into battle against the Chinese, and they are believed to have used them in their operations in Hungary. Although far removed from the traditional Mongol weapons, the adoption of the fire lance showed that they were willing to embrace new technologies – especially when they had the added benefit of spreading a little more terror among their enemies.

DEVELOPMENT

The earliest fire lances were developed in the tenth century and were still in use hundreds of years later.

FIREPOWER

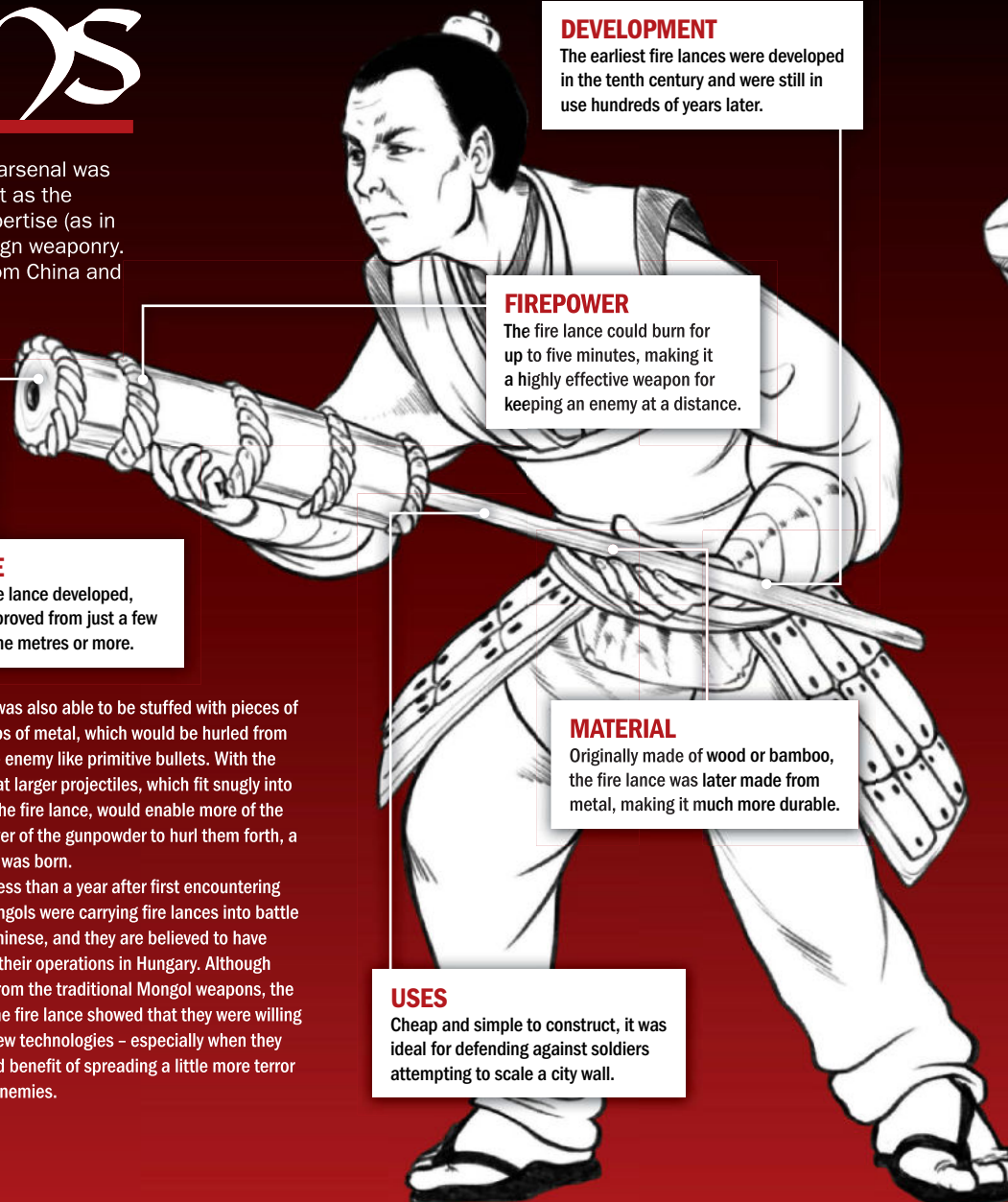
The fire lance could burn for up to five minutes, making it a highly effective weapon for keeping an enemy at a distance.

MATERIAL

Originally made of wood or bamboo, the fire lance was later made from metal, making it much more durable.

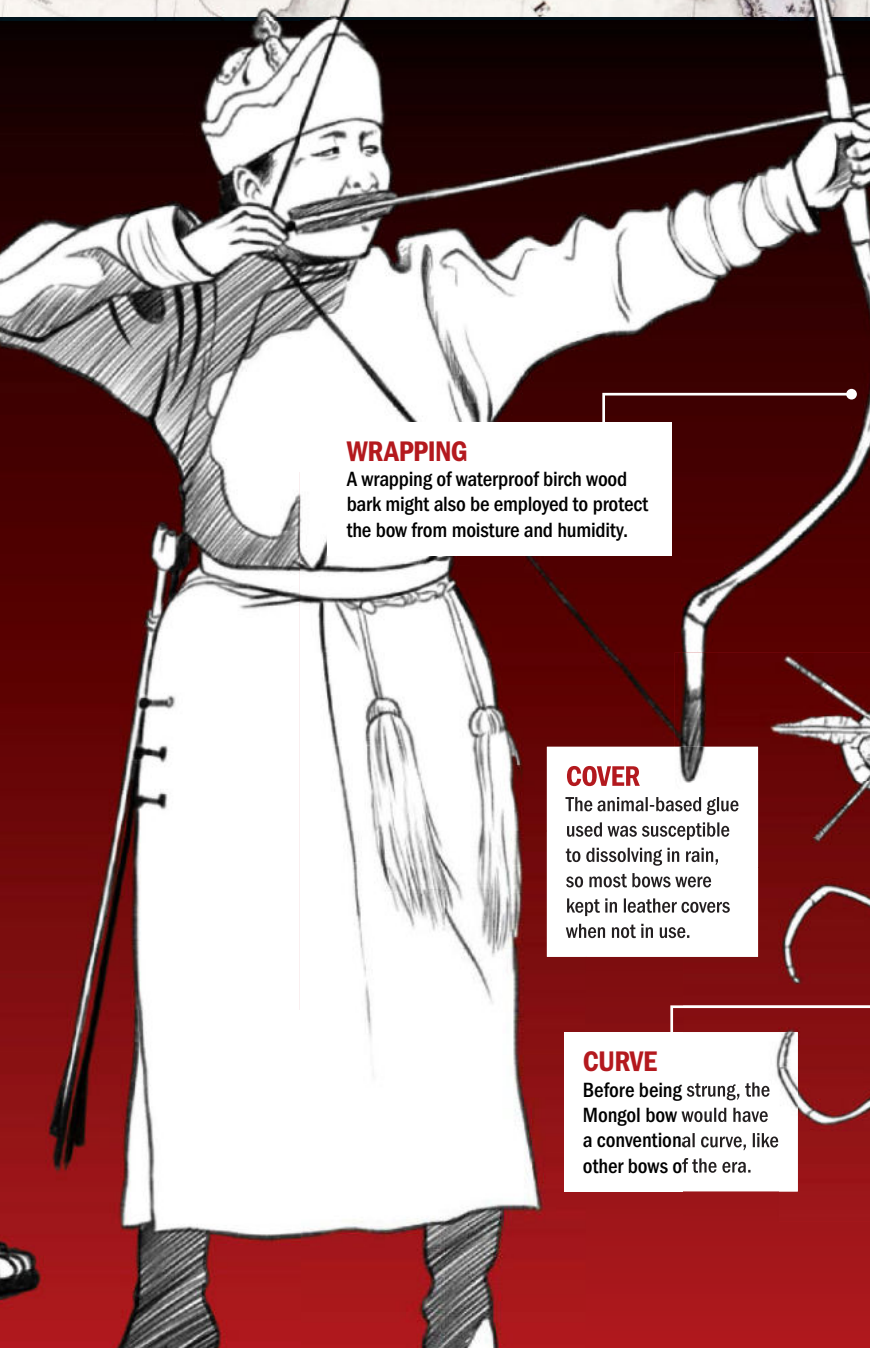
USES

Cheap and simple to construct, it was ideal for defending against soldiers attempting to scale a city wall.





The Mongol Empire was at its largest under Kublai Khan, Genghis Khan's grandson



WRAPPING

A wrapping of waterproof birch wood bark might also be employed to protect the bow from moisture and humidity.

COVER

The animal-based glue used was susceptible to dissolving in rain, so most bows were kept in leather covers when not in use.

CURVE

Before being strung, the Mongol bow would have a conventional curve, like other bows of the era.

COMPOSITE BOW

The bow was the most important weapon in the Mongols' arsenal. An ordinary bow, made of wood with a drawstring, was easy to construct, but the Mongol bow was a completely different entity.

Utilising a composite structure, with wood or bamboo, horn, sinew and animal-based glue, it was far more powerful than a regular bow, but also took far longer to construct. The wooden core had a strip of horn glued to one side, with animal sinews on the opposite side, all held in place with glue. Both horn and animal sinew had greater elasticity compared to wood and could store more energy. Once the component pieces had set together, the bow would be drawn back against its natural curve, creating the familiar shape and imparting even more power into the projectile.

Mongol warriors would carry about 60 arrows into battle – different tips would be

utilised for different jobs (incendiary arrows would be used to set fire to buildings, for instance).

Draw strength on the Mongol bow would be anywhere from 60 pounds upwards, although claims have been made that some had a draw weight of 160 pounds (which must have been rare).

The string would be drawn using only the thumb. This 'Mongolian draw' helped to ensure that the release would be smooth and not detract from the power imparted to the arrow. Many Mongols would use thumb rings to protect their digit from the extreme stress involved in the repeated operation of the recurve bow.

The Mongol bow was accurate up to a range of some 270 metres, but could carry much further with less accuracy. It was also capable of piercing the armour of the day at a range of 90 metres or so.

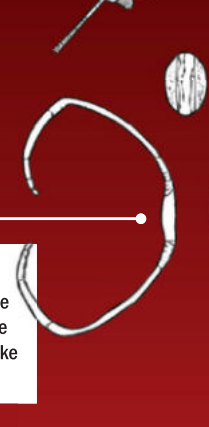
The Mongol drawing technique primarily used the thumb

SHAPE

Once strung, it would take on the classic Mongol bow shape that served to impart extra power to the arrow.

SMALL BUT MIGHTY

The composite design allowed the Mongols to use smaller bows (more easily handled in battle) without sacrificing power.



Discipline

The skills, training and weaponry of the Mongols would have counted for little were it not for their remarkable discipline. This has often been considered the result of a system of draconian punishments, which certainly played its part. The price for failure in the Mongol army could be high.

Genghis Khan had set the standard when he stated simply that: "If you are obedient to my mandates, it behoveth that, if I should command the sons to slay the father, you should all obey."

Punishment for disobedience could include flogging or even death for particularly serious offences. The Mongols were especially serious about preventing looting before a battle had been won and any man caught in the act would be summarily executed. This was not out of any distaste for looting itself, rather it was an attempt to keep the army focused on its goal of winning the battle. There would be ample time for looting later.

Discipline was even meted out to entire units. If a group of men from an arban (ten soldiers) turned tail and ran during a battle, the entire arban faced execution. Although obviously severe, this sort of code helped to ensure that units acted together, a key to success on the battlefield.

Below: A representative from the Golden Horde receives tribute from a Russian village in the 13th century

Mobility

The Mongol warrior was synonymous with his horse. The primitive, small but supremely hardy ponies (relatives of the wild Przewalski horse) that the Mongols used were able to travel long distances, and this was enhanced by the stipulation that each soldier must provide himself with four or five horses. A Mongol warrior was able to change mounts at a gallop, and the swiftness of their armies (reports commonly told of marches covering 100 kilometres in a single day) completely befuddled their European opponents, who believed they must have been facing armies of five or six times their actual number.

Mobility of a different sort was maintained by the light armour worn by the Mongol light cavalryman. The silk undershirt (the Mongols were unable to produce their own silk, so they traded for it or simply looted it from the Chinese) was reckoned to offer some protection against arrow wounds, making the barbs easier to withdraw. The undershirt also maintained flexibility, allowing the Mongol warrior to perform the 'Parthian shot', in which he would gallop full tilt away from an enemy, while turning back in his saddle to fire an arrow.



"A MONGOL WARRIOR WAS ABLE TO CHANGE MOUNTS AT A GALLOP"



TACTICS OF TERROR

INSTILLING FEAR IN AN ENEMY WAS NOT MERELY THE BY-PRODUCT OF MONGOL TACTICS, IT WAS A KEYSTONE OF THEIR ENTIRE STRATEGY

Psychological warfare was a key tactic employed by the Mongols. It is easy to characterise their treatment of captured civilians and enemy soldiers as mere barbarity (and it was undeniably brutal) but there was actually a definite purpose behind it.

By creating a terrifying image of themselves, the Mongols made it more likely that any city they approached might surrender without putting up resistance. It also made it more likely that an area would remain submissive after Mongol forces had passed through – this was hugely important, as the invading force did not have enough men to leave garrisons behind.

“CIVILIANS IN A CAPTURED CITY THAT HAD OFFERED RESISTANCE WOULD BE SYSTEMATICALLY SLAUGHTERED OR TAKEN INTO SLAVERY”

For this reason, civilians in a captured city that had offered resistance would be systematically slaughtered or taken into slavery. A small proportion of the population would be allowed to go free, however, in order to spread the word of the ferocity of the Mongols and the futility of resistance. When the city of Bukhara was taken, during the Mongol conquest of Khwarezm, several thousand civilians were allowed to go free, but only after witnessing the execution of 30,000 of their fellow citizens.

In battle, the Mongols would sometimes make use of a tactic known as *kharash*, in which prisoners would be herded before the main army as they advanced into battle. More than a mere exercise in psychological warfare, the prisoners would act as a human shield, taking the brunt of the enemy's defensive fire. The use of explosives

and burning tar in artillery barrages was also as much intended to spread fear and chaos in enemy ranks as it was to do any genuine damage.

Because of the fearsome image the Mongols carefully crafted, many cities and even whole tribes submitted without resistance. The Mongols would always accept this gladly – it was far easier than having to conquer a foe, and treating those who submitted with the same harshness as those who resisted would undermine the effects of their psychological warfare campaign.

Even so, the Mongols' terror tactics sometimes worked against them, especially in Europe, where their already terrifying reputation was enhanced with all manner of fanciful embellishments. The Mongols were even professed by some to be the descendants of Gog and Magog, a pair of man-eating giants who had terrorised the world in ancient times. Facing up to such inhuman opposition convinced many that no mercy could be expected from the Mongols even if instant submission was offered.

Below: After the fall of Nishapur, in modern-day Iran, allegedly the entire population of the city was put to death – an estimated 1,748,000 people – after which pyramids of their skulls were also supposedly built



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CHURCHILL'S CUT-THROATS

While its sister unit wreaked havoc in North Africa, the fledgling Special Boat Squadron worked to break the Axis grip on the Aegean

WORDS GAVIN MORTIMER

In the early summer of 1944, Simon Wingfield-Digby, the Conservative member of parliament for West Dorset, posed a question in the House of Commons to Winston Churchill. "Is it true, Mr Prime Minister," he enquired, "that there is a body of men out in the Aegean Islands, fighting under the Union flag, that are nothing short of being a band of murderous, renegade cut-throats?"

Churchill did not appreciate the question. "If you do not take your seat and keep quiet," he snapped, "I will send you out to join them." Churchill's tart response would have come as no surprise. He was, after all, indirectly responsible for the 'cut-throats' that Wingfield-Digby spoke of. In reality, they were the Special Boat Squadron, an elite unit whose origins stretched back to the early summer of 1940 when Churchill had called for Britain to raise its own commando unit, or 'storm troops', to hit back at the Germans. One of the first to answer the call was Roger Courtney, a prewar adventurer and explorer who had once canoed down the White Nile.

Courtney suggested forming a small unit of seaborne raiders who would approach enemy targets using 'folboats', folding canoes made of

wood and canvas that had been popularised in the 1930s for those of an adventurous bent.

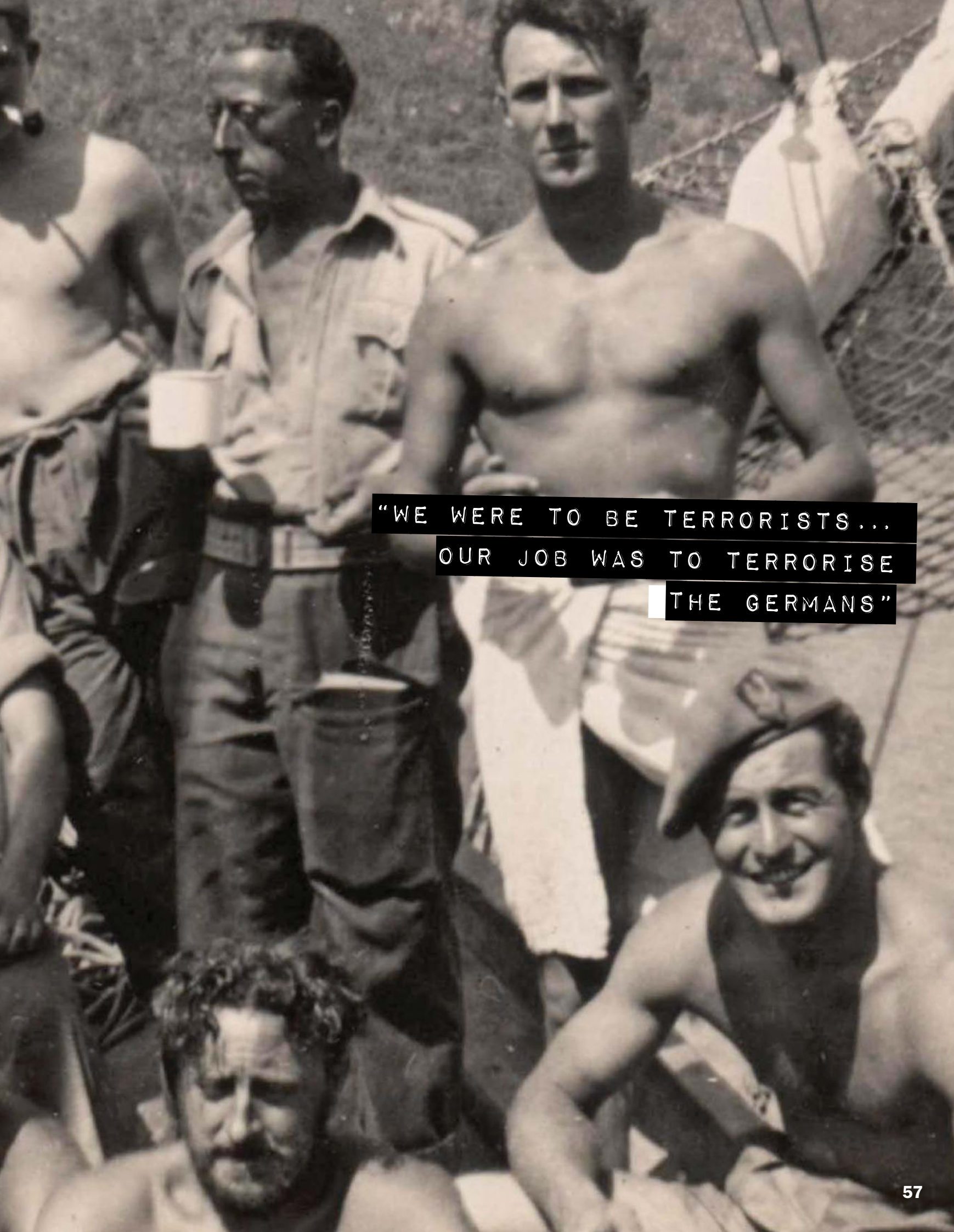
After proving the effectiveness of his idea with a successful mock attack on a Royal Naval ship, Courtney was granted permission to launch a Folboat Troop in July 1940, and just six months later, the unit was posted to North Africa. On 21 June 1941, the section achieved their first successful operation when two commandos landed by canoe on the west coast of Italy and blew a train off a coastal railway line.

It was a triumph for the unit, whose name was soon changed to the Special Boat Section, but Courtney wasn't able to savour his success for long; he was invalided to England in poor health. The section might have withered and died had its activities not come to the attention of Captain David Stirling. The young Guards Officer had only recently formed his own special force – the Special Air Service (SAS) – but their inaugural parachute operation had ended in failure (in November 1941) and Stirling was on the lookout for innovative news ways to attack the enemy.

He incorporated the Special Boat Section into the SAS, and throughout the summer of

Hank Hancock, right in the back row, was a talented photographer and artist, who recorded the SBS's exploits on film and in sketches





"WE WERE TO BE TERRORISTS...
OUR JOB WAS TO TERRORISE
THE GERMANS"

1942, they reconnoitred Syrian and Lebanese beaches, raided Cretan airfields and, on one audacious attack on Rhodes in September, destroyed a dozen enemy aircraft.

In the same month as the Rhodes operation, Stirling was authorised to expand the SAS into a regiment. He raised four squadrons – A, B, C and D, with the latter a specialist amphibious unit – but Stirling never got the chance to oversee this expansion. He was captured in January 1943 and the SAS was plunged into what one officer called “chaos”.

Middle East Headquarters in Cairo decided to carve up the SAS, sending the French soldiers of C Squadron to Britain for further training, and despatching A and B squadrons to Palestine to begin preparing for the invasion of Sicily. As for D Squadron, that was renamed the Special Boat Squadron (SBS) and placed under the command of George Jellicoe.

By the end of April 1943, the SBS had a strength of 13 officers and 118 other ranks. Many of the men were ex-Guardsmen, including Dick Holmes, a Londoner, and his great pal, Doug Wright, a farm labourer before the war who, like Holmes, stood well over six foot tall. Among the officers was Captain David Sutherland, who had gone from Eton into the Black Watch, and a 22-year-old Danish lieutenant called Anders Lassen. Tall, blond and handsome, Lassen already had a Military Cross to his name and a reputation for quick, cold efficiency. Holmes was impressed by Lassen's

“ability to transform himself into a killing machine, to perform the task with a panache that earned him the reputation of a killer of Germans par excellence.”

One of the handful of signallers in the SBS was John Waterman. He recalls that April and May were spent preparing for operations, undertaking arduous route marches and PT drills, but also more specialised tuition. “We trained in all sorts of weapons, including captured weapons,” he said. “We also were taught how to use plastic explosives and then we did our sea training. You were taken a mile out to sea in a motor dory and then you jumped into water in full kit and swam back to shore.”

The inaugural SBS operation ended in failure when a raid on Sardinia in early July failed due to a combination of sickness – the SBS base in Algiers was rife with Malaria – and treachery. The unit's Italian-American guide turned out to have more allegiance to Italy than America, and once on Sardinia he alerted the Italian forces to the presence of the British.

In the same week that the Sardinia operation went awry, David Sutherland and 12 men

landed on Crete. Establishing his headquarters close to the landing beach, Sutherland sent B Patrol, under the command of Ken Lamonby and consisting of lance-corporal Dick Holmes and two other men, to attack an airfield near the island's capital city of Heraklion. Meanwhile, C Patrol, led by Lassen, was to hit the airfield at Kastelli.

For most of the men on the raid, this was their first experience of guerrilla warfare, and Holmes recalled his “heart pounding like shit” as they headed inland from the beach, each man carrying about 80 pounds over rough and rocky terrain. “Our rucksacks were these big Italian packs,” recalled Holmes. “They had no framework and so we put a groundsheet between our clothes and the pack otherwise they chafed the skin.”

The unit's D-Day came on 4 July, and Lassen's patrol infiltrated their target undetected. Cretan resistance fighters had informed the SBS officer that there were eight Stuka dive-bombers on the eastern side of Kastelli airfield, and five Junkers 88 bombers and a couple of fighters on the western side.

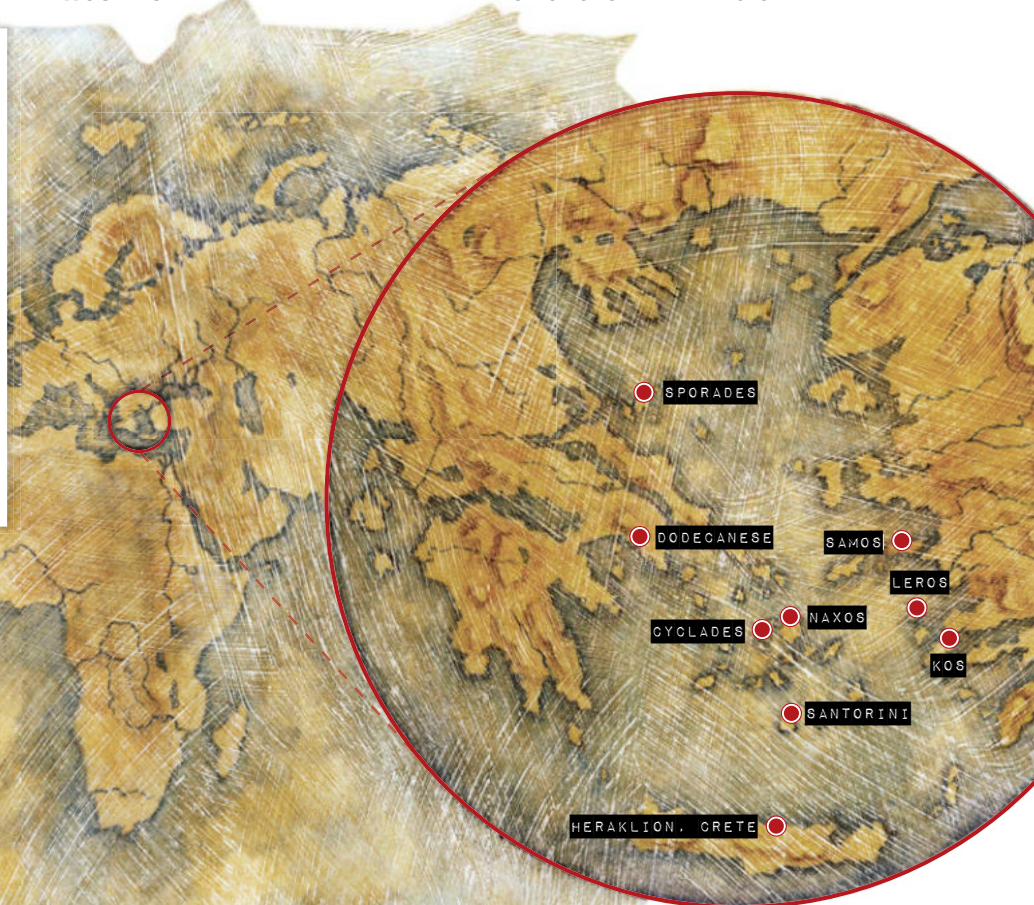
“YOU WERE TAKEN A MILE OUT TO SEA IN A MOTOR DORY AND THEN YOU JUMPED INTO THE WATER IN FULL KIT AND SWAM BACK TO SHORE”



THE HUNTING GROUND OF THE SBS

ALTHOUGH CAPTURING THE AEGEAN ISLANDS SEEMED AN UNIMPORTANT FOLLY TO MOST, CHURCHILL WAS CONVINCED THAT TAKING CONTROL OF THEM WOULD UNDERMINE HITLER AND THE AXIS FORCES IN THE REGION

For the first nine months of 1944, the SBS waged a guerrilla war in the Aegean, using this vessel, the *Tewfik*, as their main base



ANDY LASSEN'S VICTORIA CROSS

**THE ONLY MEMBER OF BRITAIN'S
SPECIAL FORCES TO BE AWARDED
THE VC WAS A DANISH OFFICER, WHO
RECEIVED THE HONOUR POSTHUMOUSLY**

On the night of 8/9 April 1945, Anders Lassen led a ten-strong SBS patrol to attack a series of German machine-gun emplacements on the eastern shore of Lake Comacchio.

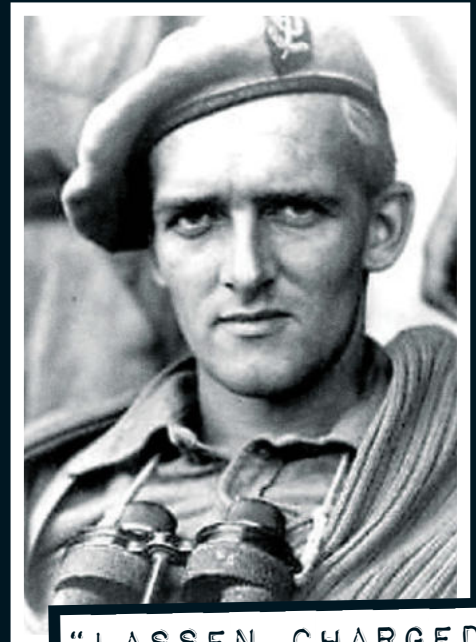
The lake, a natural obstacle to the progress of the Allied advance north through Italy, was well defended by the Germans on the north shore, and the SBS task was to eliminate the smaller force on the east, while also causing a diversion to the main assault.

Two local fishermen guided the SBS across the lake in wooden fishing boats, and once ashore, the Dane led his men along a road that ran parallel to the water. They soon encountered the first machine-gun nest, and although that was successfully subdued, more enemy fire was poured down the road.

Two SBS men were killed, another wounded, and the attack was in danger of faltering. Seizing the initiative, Lassen charged forward, zigzagging up the road, throwing grenades and firing bursts from his Tommy gun. One, two, three German positions were destroyed, but then Lassen was mortally wounded.

His parents were presented their son's Victoria Cross by King George VI in December 1945, the citation praising their son's "high sense of devotion to duty and... magnificent courage."

Below: After being wounded, Lassen refused to be evacuated as he said it would endanger further lives



"LASSEN CHARGED
FORWARD, ZIGZAGGING
UP THE ROAD,
THROWING GRENADES
AND FIRING BURSTS
FROM HIS TOMMY GUN"

The four raiders carried Lewes bombs (named after Jock Lewes, an SAS officer killed in December 1941), which were stodgy lumps weighing just a pound and consisting of plastic explosive and thermite rolled in motor car oil. Lassen and his men were busy planting bombs on the Junkers when they were challenged by an Italian sentry. Shots were fired and in seconds the airfield was swarming with guards. But it was dark, the Italians were nervous, and when Lassen threw a couple of grenades, pandemonium ensued. The SBS dispersed their remaining bombs on a variety of targets before withdrawing unscathed. At the same time but approximately 15 miles north, Dick Holmes was approaching his target through some olive trees. It was no longer an airfield, which had been found to be inactive, but a large petrol dump encircled by an earthen wall.

The other three men of B Patrol were dealing with an adjacent bomb dump, leaving Holmes to creep along the dozens of drums of valuable fuel, placing charges at regular intervals. Suddenly he saw no more than 30 yards away a German guard and his dog. "The sentry was about to continue his patrol," wrote Holmes in his report, "when a second guard with a dog came past the dump and the pair began a lengthy conversation." The presence of the guards caused the other SBS raiders to abort their attack on the bomb dump.

Praying that none of the two-hour fuses would go off prematurely, Holmes hid among

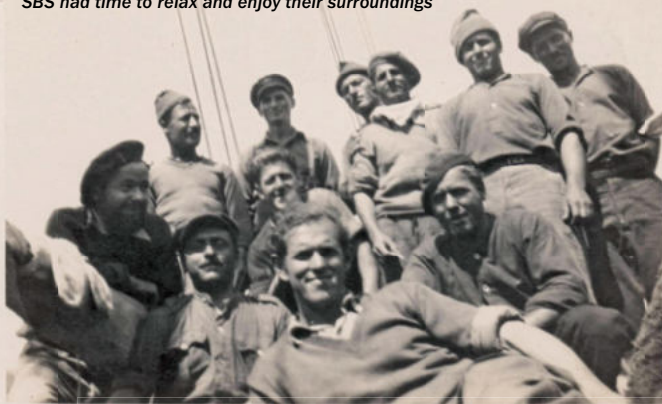
the barrels of oil as the two Germans gossiped, occasionally telling their dogs to stop whining. "To my apprehensive ears the dogs seemed very restless, as if they knew I was hiding just a short distance away," recalled Holmes. "But neither guard picked up on their dogs' agitation, and after half an hour the Germans moved away from the dump."

At 1.10am, Holmes's bombs exploded, causing him to perform "a little dance on the Cretan hillside." The next morning, a local informed the raiders that flaming streams of petrol had cascaded through the earthen walls and engulfed the adjacent bomb dump, blowing it sky high.

Days after the attack, the *Egyptian Mail* newspaper boasted of a "Smash and Grab Land Raid on a Crete Airfield." The SBS had even escaped from the island with a couple of prisoners from a German patrol they'd encountered on their way back to the beach. Back in Cairo, the British treated their prisoners to dinner at Groppi's, one of the city's most celebrated restaurants. Holmes (awarded a Military Medal for his part in the raid) recalled that after three weeks on Crete, the SBS were bearded, dirty and unkempt, but the stares they received as they strode into Groppi's "were nothing compared to the stares accorded the two Germans."

The collapse of Benito Mussolini's dictatorship in Italy had significant ramifications for the SBS and the islands of the Aegean,

When they weren't raiding islands, the men of the SBS had time to relax and enjoy their surroundings



Above: The SBS operated from a remote base in the Gulf of Kos in Turkish waters, in flagrant breach of the country's neutrality



Regular resupplies were delivered to the SBS from Palestine, but they also pillaged the German garrisons they raided

CHURCHILL'S CUT-THROATS

hitherto an unimportant backwater in the European Theatre. The islands – to the north the Sporades, the Cyclades in the west and the Dodecanese in the east – now became of strategic importance. Most had been garrisoned by Italians, and following the Armistice in September 1943, the British moved to take over the islands, some of which contained airstrips from where they could attack the Balkans Peninsula.

Hitler, for his part, had no intention of letting the British move in. "Abandonment of the islands would create the most unfavourable impression [among our Allies]," declared the Führer. "To avoid such a blow to our prestige, we may even have to accept the loss of our troops and material."

For the next year, Germany and Britain fought a bloody war for the possession of the sun-drenched islands that had been enticing pleasure-seekers for more than 2,000 years. Now Kos, Leros, Samos, Naxos, Santorini and Symi all became the scene of some brutal engagements. "We were to be terrorists... Our job was to terrorise the Germans," recalled Dick Holmes. British forces, the SBS among them, had been forced to withdraw from the Aegean in the autumn of 1943, when the Germans launched a major assault to retake the islands. In early 1944, Jellicoe was instructed to hit back, fighting the guerrilla war for which his men been trained. First, the SBS were to focus their attacks on shipping and harbour installations so as to reduce the enemy's

capability to move quickly from island to island; then they were to launch hit-and-run raids on the islands themselves, first in the Dodecanese and then moving further afield to the western Cyclades and the Sporades in the north. As one of their officers commented, they were to act as "legitimised pirates."

The SBS headed north west to a remote bay on the west coast of Turkey aboard several motor launches and a 180-ton schooner, Tewfik, which John Waterman recalled had a reputation of being temperamental. "They would have a hell of a job getting it going sometimes," he said. "So Lassen would use an explosive charge. He would open a sort of hatch, take some explosive, prime it and drop it in and then screw the thing back up, and it would get the engine going."

Once anchored in the isolated bay, with the Turks turning a blind eye to the flagrant violation of their official neutrality, the SBS began to

"ONCE ANCHORED IN THE ISOLATED BAY, WITH THE TURKS TURNING A BLIND EYE TO THE FLAGRANT VIOLATION OF THEIR OFFICIAL NEUTRALITY, THE SBS BEGAN TO TERRORISE"

It was Churchill's vision to take control of the Greek islands with a small party of highly trained men





DISBANDED

THE LABOUR GOVERNMENT DISBANDED THE SBS IN 1945 BECAUSE IT ENVISAGED A WORLD OF PEACE WITHOUT THE NEED FOR SPECIAL FORCES

The Aegean had been the ideal theatre for the SBS, allowing them to wage a guerrilla war in which courage went hand in hand with initiative and daring. The operations that followed were less successful, although they had the honour of being the first British soldiers to liberate the Greek city of Salonika in October 1944. In Greece and Yugoslavia, they became increasingly caught up in the incipient civil wars, and by the spring of 1945, opportunities to engage the enemy were restricted to small raids against Adriatic islands off the Croatian coast. The SBS were preparing to deploy to the Far East when the USA brought the war to an end with its two atomic bombs, and in October 1945, the SBS was officially disbanded.

"THE SBS WERE PREPARING TO DEPLOY TO THE FAR EAST WHEN THE USA BROUGHT THE WAR TO AN END WITH ITS TWO ATOMIC BOMBS"



Corporal Aubrey of the SBS sharpens his fighting knife as he prepares for combat



terrorise. One patrol landed on Symi and killed ten Germans; another wrecked the cable stations on Lisso and Archi; one raiding party intercepted three enemy vessels and sent them and their crew to the bottom of the Aegean.

In the early hours of 23 April 1944, Lassen and 18 men came ashore on Santorini and made for the main German garrison. One of the raiders recalled that "Lassen's motto on prisoners that night seemed to be 'don't take any'." They entered the garrison unseen, and once inside, the killing began.

The SBS moved methodically through the building in pairs, one man throwing in a grenade, the next raking the room with machine-gun fire from the side of the door. "That was the only time I was in action side by side with Lassen and it's one of the reasons I'm trying to forget the war," recalled Sergeant Jack Nicholson years later. "It's no fun throwing grenades into rooms and shooting sleeping men. That garrison could have been captured."

While Lassen was wiping out the garrison on Santorini, Lieutenant Kingsley Clarke was sent on a tour of the islands with instructions from David Sutherland to spread alarm and despondency at every opportunity. With him went some of the most experienced men in the squadron, including Dick Holmes, Doug Wright and Duggie Pomford.

First they hit Kos, destroying the island's telegraph station and killing a number of Germans. They then set sail for Amorgos, 15 miles east, having learned that approximately 30 Germans had recently left the island for Santorini – they were despatched to help hunt

for Lassen and his men, who had already escaped. "We were armed to the teeth, bearded and a pretty frightening sight," recalled Holmes. There were ten Germans still on the island and the SBS were told by locals that they were billeted in the village school.

The SBS launched the attack on the school with a single grenade. Then Doug Wright opened up with his Bren from a roof overlooking the building. "I fired ten Bren gun magazines loaded with a good mixture of ball, tracer and incendiary and armour piercing," he remembered, "raking all the windows and doors of the building."

Immediately Wright ceased firing, Pomford dashed forward, throwing a grenade through a window and then firing a quick burst from his Tommy gun. Clarke called on the Germans to surrender. Instead they chose to burst out of the building, guns blazing as if they were Wild West bandits fleeing a botched bank raid. Two of the ten escaped in the darkness; the rest were killed. "It wasn't possible to take many prisoners," reflected Wright, who was awarded the Military Medal for his part in the attack.

Attacking the islands was the easy part for the SBS. It was the voyage back to their hideout in Turkey that was fraught with danger. Returning from Amorgos, the engine blew on their wooden fishing boat, so they reverted to sail. "On a couple of occasions German aircraft came in low to investigate us," recalled Holmes. "Fortunately some of the boys had taken to wearing the German peaked caps and we carried a lot of German weapons so that fooled the pilots. It was pretty nerve wracking."

CHURCHILL'S CUT-THROATS

An SBS patrol completes its tour of the Acropolis during their posting to Athens in the late autumn of 1944



At the end of May, S Squadron received orders to return to Palestine. Sutherland, who, not wishing to miss out on the action, had led a raid against the island of Lesbos, totted up the squadron's scorecard in the previous two months: three caiques (local wooden fishing boats used by both sides) captured and 12 sunk or damaged; three wireless stations destroyed and 11 more captured; three cable stations destroyed and dozens of enemy soldiers killed or captured. In addition, 25 tons of much needed food had been distributed to the malnourished inhabitants of the islands. "I reflected as we sailed quietly south back to Beirut how special these officers and men were," recalled Sutherland. "The

operations were well planned and carried out in a highly professional way at all levels."

Donald Grant, an American war correspondent who had accompanied the SBS on one raid to see first hand their skill in guerrilla warfare, subsequently recounted the experience in a radio broadcast on 22 May 1944. Having described a typical raid, he concluded: "There is considerable variation in uniform, but all are dirty, greasy and torn. About the only common garment to all Raiding Force men is a strangely hooded jacket, which makes them appear to be a band of Robin Hood's merry men, stepped out of a story book, complete with knives slung at their belts."

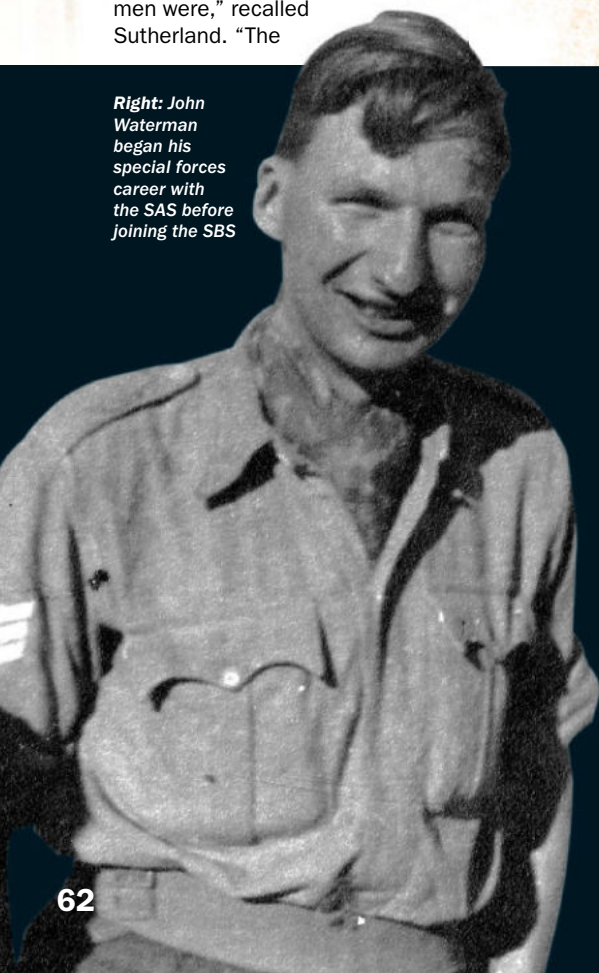
Such melodramatic broadcasts alarmed not only the Germans but also one or two Britons

— like Simon Wingfield-Digby, the Conservative MP who simply couldn't comprehend what was required to defeat a military machine as savage as the Nazis. Churchill, fortunately, wasn't so naive, and it was thanks to his 'cut-throats' that in May 1944, the Germans drafted in another 4,000 troops to garrison the Aegean Islands at a time when their resources were already desperately thin.

"We didn't do anything that affected the war in any great way," reflected Dick Holmes. "But I think we slowed them down in the Aegean and we also tied up quite a few thousand of their troops when they would have been better deployed in Russia or France, and we were doing that with only a few dozen men of our own. So we felt we were doing something necessary."

Images: Getty, Textures.com; Thinkstock

Right: John Waterman began his special forces career with the SAS before joining the SBS



JOHN WATERMAN

AN SBS SIGNALLER FROM 1943-45, WATERMAN IS ONE OF THE LAST REMAINING VETERANS OF THE ELITE UNIT

A Kentish man, Waterman joined the SAS in 1942 and transferred to the SBS shortly after, serving with them until their disbandment in October 1945. He saw action in the Aegean campaign, the Balkans and Italy, and a few years after the war he emigrated to Canada where he still lives.

"I joined the Special Boat Squadron when it was formed in 1943 as one of the unit's four signallers and I worked closely with Major George Jellicoe, our CO. In early 1944, the SBS assembled a small force working in the Aegean islands from a base on a remote stretch of Turkish coastline. The Germans had kicked us out of the likes of Leros and Samos the previous autumn so our role was to cause as much trouble as possible on the Dodecanese islands. Our base was a large wooden schooner, and from there we sailed into the Aegean in small wooden fishing boats to attack the islands. A lot of the time I was on the schooner, maintaining radio communication with Jellicoe in Palestine, but I went on one raid to Nisyros. The sole Italian on

the island was on the side of the Germans, but the moment he saw us landing, he took to the hills.

"Not all the islands were garrisoned by Germans but on the ones that were, we would raid their billet and destroy any communications we found. By the summer of 1944, the Germans had reinforced the islands in the Aegean with thousands more troops, at a time they could ill afford to.

"From the Aegean we moved into Greece, in the van of the invasion force, and we liberated the port of Patras in the south of the country, before chasing the Germans as far as Lamia, before returning to Athens. In the spring of 1945, we started to raid the islands off the coast of Croatia, crushing the last German resistance.

"Reflecting on my years in the SBS, I did feel I was among exceptional soldiers. We had a confidence in our own ability and we were expected to display initiative and have an independence of thought that wasn't that common in the British Army of the time."



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The Lord's Resistance Army

How a brutal Christian terrorist group and its deranged leader carved a trail of death and despair in the lawless jungles of Central Africa

WORDS MIGUEL MIRANDA

Underneath the endless forest canopy of eastern Congo, lawless and desperate men eke out a living from their primeval surroundings. Known for brutalising adolescent children, whatever outrages are committed in their jungle hideaways never resonate in the wider world.

Often armed with rusting Kalashnikovs, they are adept with machetes and hatchets when killing and maiming is involved. It's assumed that most of these brigands are trapped by their circumstances, enslaved at a young age and forced to fight for their survival. Resisters often have their appendages chopped off or their faces mutilated with knives. Progeny are known to witness the murder of their parents before they're whisked away.

These are the remnants of the Lord's Resistance Army (LRA). Among their number – unless he's already dead – is one of the world's most dangerous fanatics: Joseph Kony. Together with his accomplices Vincent Otti, a serial rapist, Okot Odhiambo, Raska Lukwiya (who have all been confirmed as deceased), and former child soldier Dominic Ongwen (who is now on trial charged with crimes against humanity), Kony is an international war criminal.

If photographs from years ago are to be judged, more than a quarter century of hard living has left Kony gaunt and ill. His presence isn't a commanding one. He is now past middle age and the ruthless legion he once commanded has been whittled to stragglers. Either way, the memory and the bitter heritage left by the LRA shall live on in the annals of Africa's horrific wars.

The LRA thrived in the chaos of collapsing failed states and endless civil strife. Founded in the bucolic wilds of northern Uganda where the Protestant faith and other strains of Christianity endured, the movement fed on the Acholi

people's antagonism towards the strongman Yoweri Museveni's regime in Kampala, Uganda's scenic capital.

Museveni, a war veteran and guerrilla leader, emerged as a leading opposition figure after the collapse of General Idi Amin's regime in 1979. When former Prime Minister Apollo Milton Obote emerged victorious in national elections the following year, Museveni rallied his National Revolutionary Army (NRA) and launched the Bush War, the axis of which was in the country's southern provinces.

There was little that could be deemed heroic during the Bush War's duration. It was a conflict that wasn't marked by critical battles or heroic last stands. Instead, many of Idi Amin's ex-soldiers were employed by Obote to terrorise fellow Ugandans and undermine the NRA. Rather than winning hearts and minds, pillaging and displacement was the preferred method for waging counterinsurgency.

Museveni had an axe to grind with Obote, whose corruption and patronage politics paved the way for the coup d'état that brought the bloodthirsty Idi Amin to power. A military junta eventually overthrew Obote again in 1985 and its leader, General Tito Olara-Okello, tried to reason with Museveni to broker peace. By then, Uganda's economy was in tatters and what was left of the armed forces had surrendered itself to pillaging and arson.

In 1986, the NRA swept into Kampala and Museveni sent his opponents fleeing out of the country. Many of the defeated junta's soldiers retreated north to Acholiland near the border with Sudan's restive south. This impoverished frontier was a place where slavery, poaching, smuggling, and cattle rustling thrived in previous centuries. It was where Museveni's authority, and by extension the authority of the state, was weakest.

JOSEPH KONY'S REIGN OF TERROR

1877

First recorded contact between European missionaries and the kingdom of Buganda, a prominent Muslim kingdom. The efforts of Anglican and Catholic missionaries thrive and Christian communities pave the way for peaceful colonisation.

1962

Britain divests itself of its Central African jewel without unnecessary conflict. Uganda gains its independence after a referendum and the brilliant young lawyer Apollo Milton Obote leads the newly formed government.

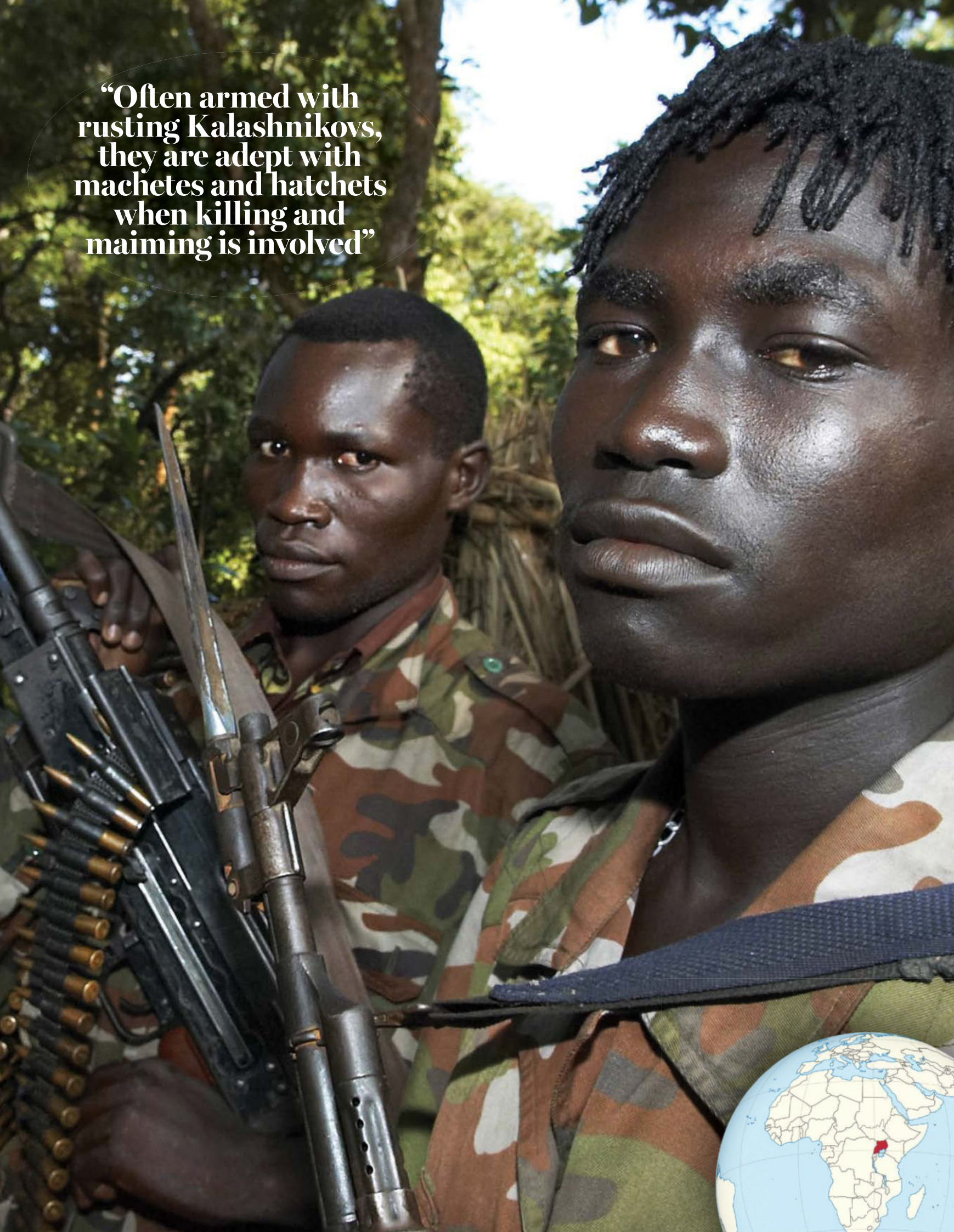
1971

Disgruntled soldier Idi Amin overthrows Obote in a coup and declares himself president. Despite his charismatic leadership, the Amin regime is an economic disaster for Uganda and he is overthrown in 1979.

LRA fighters are usually armed with Chinese copies of the ubiquitous Russian AK-47



**“Often armed with
rusting Kalashnikovs,
they are adept with
machetes and hatchets
when killing and
maiming is involved”**



In the mid-1980s, an Acholi woman named Alice Auma emerged from Paraa National Park and proclaimed herself a spiritual medium. Animated by the ghost of a deceased soldier she called Lakwena, she gathered a ragtag army who bathed themselves in magical oil and fought with sticks.

In 1988, Alice 'Lakwena' Auma's Holy Spirit Movement tried to march on Kampala but were gunned down and dispersed by Museveni's soldiers. Their leader, no doubt fearing for her life, fled to Kenya and lived there until she passed away in 2007.

But the fires of rebellion still burned in Acholiland. It was a relative of Lakwena, an alleged cousin, who later emerged as another would-be saviour. He sought to rule by the Ten Commandments passed down to Moses. He would gather forth another Christian army and use it to build his holy kingdom. This was Joseph Kony.

The Cross and the Crescent

"Kony's main objective is to cleanse Northern Uganda of the older generation of Acholi people and to rebuild the culture according to his own ideologies. In order to accomplish this objective, Kony chose to enlist an army of children who, through violent force, help him exterminate the Acholi population."

This excerpt was written by the author and researcher Madeline Beard, who wrote a thorough statistical analysis of violence in Northern Uganda. In the process, she captured in writing the cultish nihilism of the LRA's world view. To think, the terrifying roots of Kony's depravity are found in the distant past.

During the great scramble for Africa among Europe's rival powers, it became imperative that the Nile River's southernmost extremities fell under the benign dominion of a colonial master. Following the routes taken by Arab merchants and slave traders, Europeans arrived in Buganda during the mid-19th century. They found a nation far-removed from the idyll of African savages in their squalid hamlets, itself a condition that came about in neighbouring Belgian Congo from relentless European exploitation.

The kabaka rulers of Buganda, who trafficked in Western firearms and elephant tusks, presided over an incredibly prosperous society that was in the process of being converted wholesale to Islam. However, misgivings about Muslim Egypt's designs on Buganda and its access to the great lake that was drained by the Nile compelled the Bugandan kabaka to welcome Europeans.

Anglican and French Catholic priests were soon converting the Baganda people. By 1892, the Protestant-aligned Bugandan kingdom was confederated by force of arms together with nearby territories, including the clans of

"Kony's main objective is to cleanse Northern Uganda of the older generation of Acholi people and to rebuild the culture according to his own ideologies"

Acholiland. The British called their newly gained possession the Uganda Protectorate.

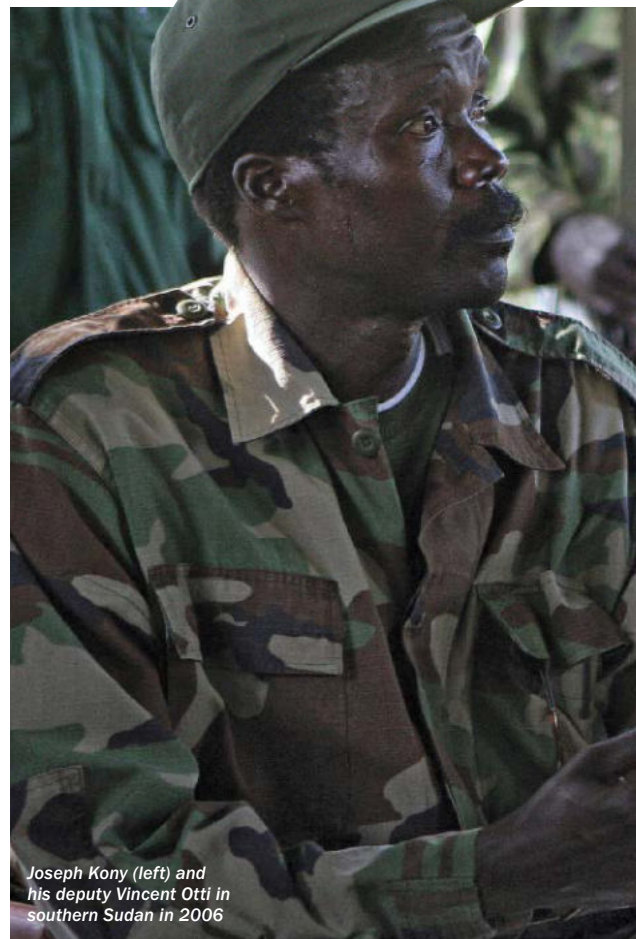
The historical record shows that some countries struggling to overcome internal differences make civil war the rule rather than the exception. It takes a strong centralised state with functioning institutions and large-scale social engineering to uplift a society from its rude beginnings and achieve a peaceful internal equilibrium that could pass for what is 'modern'. When it comes to Uganda, it appears the three decades after its independence in 1962 were a period of flux, and this is precisely what set the stage for the LRA's rise.

As for Joseph Kony, his mission and message hardly mattered except for the Acholis who followed him. At first they called their group the United Holy Salvation Army. It was changed to Uganda Christian Army soon after. Unlike other African rebel leaders, Kony never cast himself as a strategist or a freedom fighter. Who exactly Kony is has never been ascertained by journalists, spies, or even members of his inner circle who have defected over the years.

It was between 1993 and 1994 that the LRA really became a force to be reckoned with. In neighbouring Sudan, a vast country with enormous oil reserves plagued by endless civil war, a new strongman, General Omar al-Bashir, had seized power in Khartoum.

Under his direction, the Sudanese army began liaising with the LRA and then encouraged their relocation out of Acholiland. The support went further as the LRA now had camps in southern Sudan and a convenient logistics train for arms and ammunition.

Instead of galvanising the LRA's efforts to defeat the Museveni regime, the group devolved and began terrorising northern Uganda. Their methods and conduct were brutal and effective. LRA fighters simply emerged from



Joseph Kony (left) and his deputy Vincent Otti in southern Sudan in 2006



A soldier of the Uganda People's Defence Force patrols the Central African jungle during an operation to hunt Kony

Right: One child survivor's vivid drawing illustrates how the LRA attack defenceless villages with overwhelming firepower

1980

With Idi Amin toppled the previous year, national elections are held on 10 December. Obote wins but his victory is contested by a rebel group called the National Resistance Army.



1986

The NRA led by Yoweri Museveni seizes power by capturing Kampala. The self-proclaimed prophet Alice Lakwena launches a resistance movement among the marginalised Christian Acholi people of northern Uganda.



1987

With Alice Lakwena forced into exile in Kenya, a young preacher named Joseph Kony assumes command of the Acholiland rebels and renames their fledgling organisation the United Holy Salvation Army.

1991

Kony begins his reign of terror in northern Uganda with brazen attacks on villages. Entire communities are displaced and thousands of abducted children are forced to enlist in his growing legion.



the bush to overrun a village or a small town. They would go house to house and drag the inhabitants out, murdering parents, raping the women, and taking the young boys.

Kony profited from this senseless violence and became the most feared man in northern Uganda. He was a self-proclaimed Christian emboldened by the Holy Spirit, an ardent polygamist who is believed to have sired more than 40 children.

As the LRA's ranks swelled, Kony began conducting his own social experiments among his captive flock, marrying off young girls to his commanders and forcing the boys to murder and maim innocent people – a psychologically damaging conditioning process.

An exhaustive study on adolescent women kidnapped by the LRA revealed the kind of treatment they could expect. "The abduction and distribution of females was often orchestrated by the top LRA leadership, which dictated the number of females targeted for abduction, their placement within LRA units, and which males would take them as wives."

The authors of the study, Dr Dyan Mazurana and Khristopher Carlson, also interviewed survivors. One of them, kidnapped at 14 and a 'bride' for eight years, recalled how rape was used to break a young girl's will. Discipline was enforced in a most draconian manner, with fear and collective guilt working as psychological chains. "One day some girl tried to escape, and they asked us... they gave us all big sticks and they ordered us to beat her to death."

The LRA's notoriety harmed the very same Acholi people that it claimed to represent. An American researcher who spent a month in northern Uganda a few years after the LRA retreated to Sudan and Congo discovered that the word "Kony" had become a derogatory term for Acholis whenever they visited other parts of the country.

Khartoum's hand

Whatever the LRA accomplished throughout its storied existence would not have been possible without the ongoing wars that made their region so destabilised and poverty stricken. Whether it was the civil war in Sudan, the Rwandan genocide or Congo's own unravelling, each crisis eased the pressure on them. It was the collapse of Zaire, known today as the Democratic Republic of Congo (DRC) that was a huge boost for the LRA.

After decades of support from the United States, the extremely corrupt regime of Mobutu Sese Seko began to unravel. The humanitarian crisis sparked by events in Rwanda from 1994-96 flooded his country with refugees and former Hutu guerrillas. This enticed Rwanda, Uganda, Sudan, Zimbabwe and Angola to invade on the pretext of a multinational peacekeeping mission.



1993

Bogged down by a rebellion in the Nuba Mountains, Sudanese President Omar al-Bashir's regime begins covert support for Kony's rechristened Lord's Resistance Army to undermine Uganda's alleged patronage of Christian secessionists in Sudan.



1996

Lacking the manpower to defeat the LRA, the Ugandan government forcibly resettles 2 million villagers into guarded camps. This strategy to protect them from mass abductions causes widespread misery instead.

1996-98

The collapse of Mobutu Sese Seko's regime in Kinshasa triggers the bloody Second Congo Civil War that kills 3 million people and leaves a power vacuum in the country's east.



2001

The LRA is added to the US government's Terrorist Exclusion List by the Bush administration. By this time, the LRA is responsible for abducting and enslaving an estimated 40,000 children.

In reality, however, these foreign troops and their proxies were trying to exert control over the new regime in Kinshasa led by Laurent Kabila, another guerrilla leader turned strongman, and secure concessions for exploiting the fledgling DRC's resources. The LRA had little to do with these events but the resulting chaos across eastern Congo made it a haven for the group's activities, namely looting, pillaging and poaching.

After its listing as a terrorist group in 2001, whatever the LRA sought to achieve was now completely beyond its grasp. Despite its alarming success at enslaving and brutalising entire communities, the LRA never grew into a genuine fighting force that could wage a credible war against Kampala.

This became apparent when the Ugandan army launched Operation Iron Fist in 2002. While it didn't crush the LRA, it succeeded in driving them for good from northern Uganda. An unintended consequence of this was the movement's dispersal, which spread to neighbouring Congo and the Central African Republic (CAR), two of the most fragile countries in the region.

Unable to launch counter-offensives, in the aftermath of Operation Iron Fist, the LRA retaliated by attacking villages and abducting teenagers. This was the group's preferred method of warfare, melding their guerrilla search-and-destroy tactics with the traditional slave raiding, the latter practice dating to the colonial past. In 2006, there was an effort at serious peace talks in Juba, southern Sudan, between mediators and Kony's second-in-command Vincent Otti. The LRA used the negotiations as a cover to abandon its Sudanese camps and transfer to Congo instead where they carried on razing towns and villages.

These horrors reached a frenzy in 2009, when American special forces tried to direct Operation Lightning Thunder to flush Kony out of Congo. But what was supposed to be a few weeks of combat involving air strikes and commandos took months after the different units from the Ugandan army, the Congolese army (FARDC), and the Sudanese army didn't bother co-ordinating. Once again, to get even with his enemies, Kony directed another LRA campaign in eastern Congo that lasted until 2010 and left thousands dead.

An unlikely force that emerged to challenge the LRA didn't come from Africa or the international community. Rather, various NGOs and churches affiliated with the American evangelical movement waged campaigns to raise awareness about the LRA's brutality. In 2012, an advocacy founded by American missionaries calling itself Invisible Children released a 30-minute video clip titled *Kony 2012* to encourage direct action against the LRA's rampant child kidnapping and slavery.

“The resulting chaos across eastern Congo made it a haven for the group's activities, namely looting, pillaging, and poaching”



2002

Kampala launches Operation Iron Fist to crush the LRA, but its approach sparks a humanitarian crisis instead – Acholiland is nearly depopulated and the LRA fights on from its bases in Sudan.



2005

After a thorough investigation of the LRA's activities, the International Criminal Court issues an arrest warrant for Joseph Kony and four of his lieutenants.

2006

Reeling from persistent government offensives and the loss of Khartoum's patronage, the LRA agrees to peace talks in Juba, southern Sudan, although Joseph Kony refuses to attend in person.

2008

For two weeks, soldiers from Uganda, Congo and Sudan participate in Operation Lightning Thunder to destroy the LRA. Even with the presence of 17 US advisers, the effort is a failure.

2009

As retribution for the Garamba offensive, the LRA terrorises north-eastern Congo. In two years, an estimated 1,500 people are killed by them and more than 250,000 are left homeless.

THE LORD'S RESISTANCE ARMY

The CAR's internal problems also affected the LRA. In January 2015, Commander Dominic Ongwen, a former schoolboy turned mass-murdering war criminal, surrendered to Seleka militiamen. Once positively identified by visiting Ugandan officers, he was handed over to US special forces and is now at the mercy of the International Criminal Court. Ongwen's arrest is proof that the LRA as an organisation is dissipating and disintegrating.

Two years earlier, Invisible Children, with the help of another NGO, the Enough Project, were tracking LRA movement. According to their own exhaustive on-the-ground research, Kony was alive and well in the backyard of his former patron, Sudan.

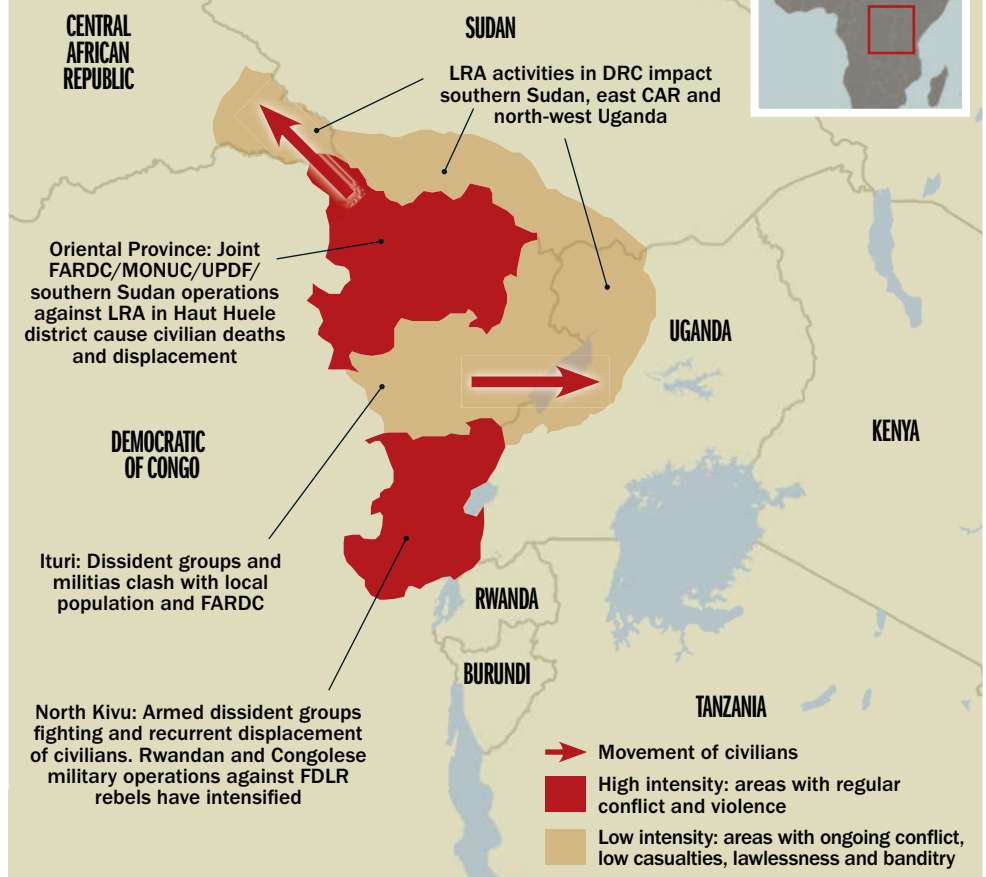
Their findings were published in the report *Hidden In Plain Sight*, which asserts that Joseph Kony and his followers are camped near the porous Sudan-South Sudan border not far from Kafia Kingi, near a Sudanese army barracks. Kony's last confirmed sighting in Kafia Kingi was in 2011, when the Obama administration announced the deployment of 100 US military advisers to Uganda. Kony's present whereabouts are unknown, but if he is alive, the question now is who will bring him to justice?

Even if the campaign went viral, it didn't result in any genuine effort to combat the LRA. It wasn't necessary, because in the previous year the LRA lost their sanctuary with the independence of South Sudan in 2011. After a decade removed from their bases in Acholiland and then the loss of their Sudanese backyard, the LRA command structure's authority was beginning to wane. In the beginning of 2013, the regime of President Francois Bozize collapsed after a rebel movement called the Seleka stormed into the CAR's capital, Bangui. With this massive political upheaval, it's little wonder that the LRA found the Central African Republic an enticing refuge. But it was an investment with diminishing returns.

AN APOCALYPTIC ARMY

LORD'S RESISTANCE ARMY AGGRESSION: 2009-PRESENT

For 20 years the LRA's activities in northern Uganda reduced it to a lawless wasteland of burned villages and orphaned children. After migrating to Congo from 2005-08, the LRA's influence has waned but its followers still pose a threat to local communities.



Citizens recently displaced by an LRA attack patrol the outskirts of their village

Inset, above: A victim of an LRA attack shows her injuries in March 2015



2011

After three decades of unending strife, South Sudan formally secedes from Sudan on 9 July. Within a year, the oil-rich yet underdeveloped Christian country is torn by a civil war.

2015

With Uganda enjoying relative peace and economic growth, the aging President Yoweri Museveni is readying his administration for a fifth term that will extend his 30-year reign.



Heroes of the Victoria Cross

ANDREW MYNARSKI

While the bomber he crewed hurtled towards oblivion, Pilot Officer Andrew Mynarski gave his life trying to save another rather than preserve his own

WORDS DOM RESEIGH-LINCOLN

Andrew Charles Mynarski was born in Winnipeg on 14 October 1916. The second son of two Polish immigrants, he grew up with three sisters and two other brothers. It was a big family for anyone to live in, and being a quiet boy it was said Mynarski often got lost in the maelstrom. As a boy, he attended the King Edward and Newton Elementary schools, before studying and later graduating from St John's Technical College.

Mynarski wasn't averse to pulling his weight, and when his father passed away in 1932, the 16-year-old took his burgeoning affinity for woodwork and soon began working as a chamois cutter at a local furrier. His deft touch with the tools of carpentry brought him quite the reputation, but it was a career in the military that would eventually come calling. During his early 20s, Mynarski began a short spell with the Royal Winnipeg Rifles (a one-battalion infantry unit of the Canadian Army) between 1940 and 1941, but he would eventually enlist in the Royal Canadian Air Force shortly before his 25th birthday.

However, his RCAF career didn't get off to the smoothest of starts. In September 1941, Mynarski was posted at the No 3 Manning Depot in Edmonton before completing the rest of his training at the No 2 Wireless School in Calgary. Yet, try as he might, Mynarski simply couldn't pick up the Morse Code used for communications. After a less than successful time at the Wireless School, the young Canadian was transferred to the No 3 Bomb and Gunnery School at MacDonald, Manitoba. Just before Christmas 1941, he graduated as an air gunner, responsible for manning the cannons on a multi-crew aircraft. He then earned his AB wing, the symbol of the RCAF, and beret.

After his wing, Mynarski was promoted to temporary sergeant in Halifax and passed between a number of units before being made a warrant officer (second class). In early 1944, Mynarski was summarily shipped off overseas to RAF Middleton St George in Yorkshire – the home of his new squadron, 419 'Moose'.

419 Squadron (which still exists today as a training program for Canadian fighter pilots) was the third Canadian RCAF bomber unit to be stationed in England, and it was as part of this crew that Mynarski's military career began to take off. He completed a total of 12 operational flights as a mid-upper gunner (someone who controls the two 50-inch machine guns atop a bomber craft) before being promoted to the rank of pilot officer on 11 June.

Sometime in 1944, the squadron began using the Avro Lancaster bomber and soon adopted it for all major operations (it was manufactured in both Britain and Canada, making the connection with Mynarski all the more poignant). It was aboard this craft, callsign #KB726, that Flying Officer Art de

Breyne, Mynarski and the rest of the crew would face their toughest challenge yet.

In the aftermath of the D-Day landings and just a day after his promotion, Mynarski and the rest of 419 Squadron were ordered to conduct a bombing raid over Northern France, focused on targeting a railway marshalling yard in the small commune of Cambrai.

There was an air of uncharacteristic anxiety about this new operation. Not only was it the crew's 13th mission, but the bomber would also take part in this raid on Friday 13th. These omens weighed heavy on the minds of 419 Squadron, but their orders were clear.

Despite their worries, Mynarski's sense of humour wouldn't be outdone – Pat Brophy (Mynarski's closest friend and tail gunner on the bomber) later remarked that his friend noticed a four-leaf clover growing near the airbase. Picking it up, Mynarski jokingly passed it to the tail gunner, only for Brophy to flick it back against his helmet with a smile.

Omens or not, the seven-man crew set off for France aboard #KB726, crossing the border into France at about 12am on 13 June 1944. Shortly after crossing over, the bomber was suddenly 'coned' (spotted) by German searchlights. Immediately falling back on drilled-in evasive manoeuvres, the heavy bomber managed to lose the searchlights and disappear back into the darkened night sky. For a few minutes, it seemed like the crew had successfully lost the gaze of the enemy, but the reality was far less forgiving.

In the blink of an eye, a single Junker Ju 88 fighter emerged from the blackened clouds. The formidable multi-role combat aircraft was one of the fastest craft in the German fleet, making the chances of the Lancaster escaping nearly



It may have taken two years for Mynarski's story to reach high command, but he was eventually awarded the Victoria Cross on 11 October 1946

“Willingly accepting the danger, Pilot Officer Mynarski lost his life by a most conspicuous act of heroism, which called for valour of the highest order”

Victoria Cross citation

01 Crossing the border

About 12am on 13 June 1944, Mynarski and six other crew members pass into French airspace aboard an Avro Lancaster Mk X bomber. Their mission is to avoid detection by German searchlights and aerial patrols and perform a bombing run on a train marshalling yard in the area of Cambrai.

02 Junkers rising

After a few minutes of flight into French airspace, German searchlights catch sight of the bomber. Evasive manoeuvres are initiated and the British craft manages to slip into the night. However, a German Junkers Ju 88 fighter emerges from the shadows and starts raking the bomber with deadly fire.

03 Abandon the craft

With German cannon fire ripping through the fuselage, two of the bomber's engines soon die. With flames beginning to spread, the pilot orders the crew to parachute to safety. While most of the crew leap out of the burning plane, Mynarski realises his friend Pat Brophy is trapped in the tail gunner turret.

04 Fighting for Brophy

Despite the danger he faces, Mynarski turns away from the safety of the exit and rushes through the growing flames to the jammed turret. With the back-up release also malfunctioning, Mynarski tries his best to open the turret but to no avail. His clothes are now on fire and he's receiving serious burns.

05 The final descent

Brophy convinces Mynarski to leave him behind, knowing his friend will die too if he doesn't go. Mynarski turns and salutes his friend before leaping free. However, his parachute is severely burned and he hits the ground much harder than a regular landing. He survives the fall but later dies at a nearby hospital due to his severe burns.

“Without hesitation, Pilot Officer Mynarski made his way through the flames in an endeavour to reach the rear turret and release the gunner”

Victoria Cross citation

impossible. The German fighter dropped to the bomber's altitude and began raking it with cannon fire. Mynarski, Brophy and the other gunners returned fire while the pilot fought valiantly to evade the deadly breath of the Junkers. It was 12.13 am, a time Brophy would later recall with perfect clarity, and #KB726 was in real danger.

Despite the evasive manoeuvres of the Lancaster, the heavy bomber was simply too slow to evade the gunfire of the Junkers. White hot bullets ripped through the fuselage, striking and igniting the wing fuel tank and knocking out both engines. With the German craft circling the now crippled bomber, the situation was rapidly deteriorating for Mynarski and the rest of the crew. Fires were spreading through the cabin; panic was beginning to set in.

De Breyne (who was piloting the plane) knew there was no hope to be found against the superior German craft and ordered his men to bail out. The bomber was now half engulfed in roaring flames. As the rest of the crew began leaping clear of the dying bomber, Mynarski finally let go of his machine-gun controls, dropped free of the turret and headed for the exit towards the front of the craft. Glancing back, he realised Brophy was still on board. Not only that, his best friend was trapped inside his turret – the spin mechanism that would allow him to climb free had jammed.

Ignoring the flames that licked at his hands and face, Mynarski fought his way to the rear of the plane and tried to un-jam the release mechanism. On he fought, doing everything to get his friend free. By this stage, he was practically engulfed in flames, his uniform and parachute already alight. But Brophy realised the gravity of the situation. The turret wouldn't shift and the plane was going down faster than

ever. Even the manual release was broken. He told Mynarski to go, demanding he get himself clear. Reluctantly and already badly burned, he complied and stood saluting his friend as he leapt clear.

Mynarski plummeted to Earth, his tattered and burnt parachute providing little resistance as he landed heavily on the ground. Despite his injuries, Mynarski survived and was soon discovered by a group of French farmers who had seen the burning bomber pass overhead. Putting out his still smoking clothes, the farmers took Mynarski to a nearby hospital, but their efforts were in vain. His burns and the severity of his landing were too much and he died several hours later.

By some bizarre stroke of luck, Mynarski's doomed friend Brophy survived the bomber's crash into the French forest below. The bomber's impact had broken the jammed turret free and thrown him clear of the burning wreck. He would make it back to England with the help of the French Resistance, but it wouldn't be until the end of the war and eventual reunification of the crew that he realised his courageous friend had died trying to save him.

It would be through Brophy and the rest of the crew's efforts that Allied Command eventually awarded the highest possible honour it could give – the Victoria Cross. While he was initially buried in a grave near the hospital he passed away in, Mynarski was eventually reinterred in Grave 20 of the Commonwealth War Graves Commission plot at Méharicourt Communal Cemetery, near Amiens, France. Even now, almost 70 years later, Mynarski's selfless attempts to save his fellow airman have made him a legend of the RCAF, immortalised forever in the annals of the Canadian and Commonwealth military.

The Mynarski Memorial Lancaster, callsigned after the one Mynarski was on board, is one of only two airworthy Lancasters in the world



Operator's Handbook

MESSERSCHMITT

Take a tour around one of World War II's most iconic aircraft and the backbone of the Third Reich's Luftwaffe

WORDS & IMAGES NEILL WATSON



The aircraft seen here is an accurate replica of a 1943 Bf 109G-6, with the unique pattern used by Hermann Graf of JG.50 – he ended the war with 212 confirmed victories in the air

MESSERSCHMITT BF 109G

CREW: 1
LENGTH: 8.95M (29FT 7IN)
WINGSPAN: 9.925M (32FT 6IN)
HEIGHT: 2.6M (8FT 2IN)
WING AREA: 16.05M² (173.3FT²)
EMPTY WEIGHT: 2,247KG (5,893LB)
LOADED WEIGHT: 3,148KG (6,940LB)

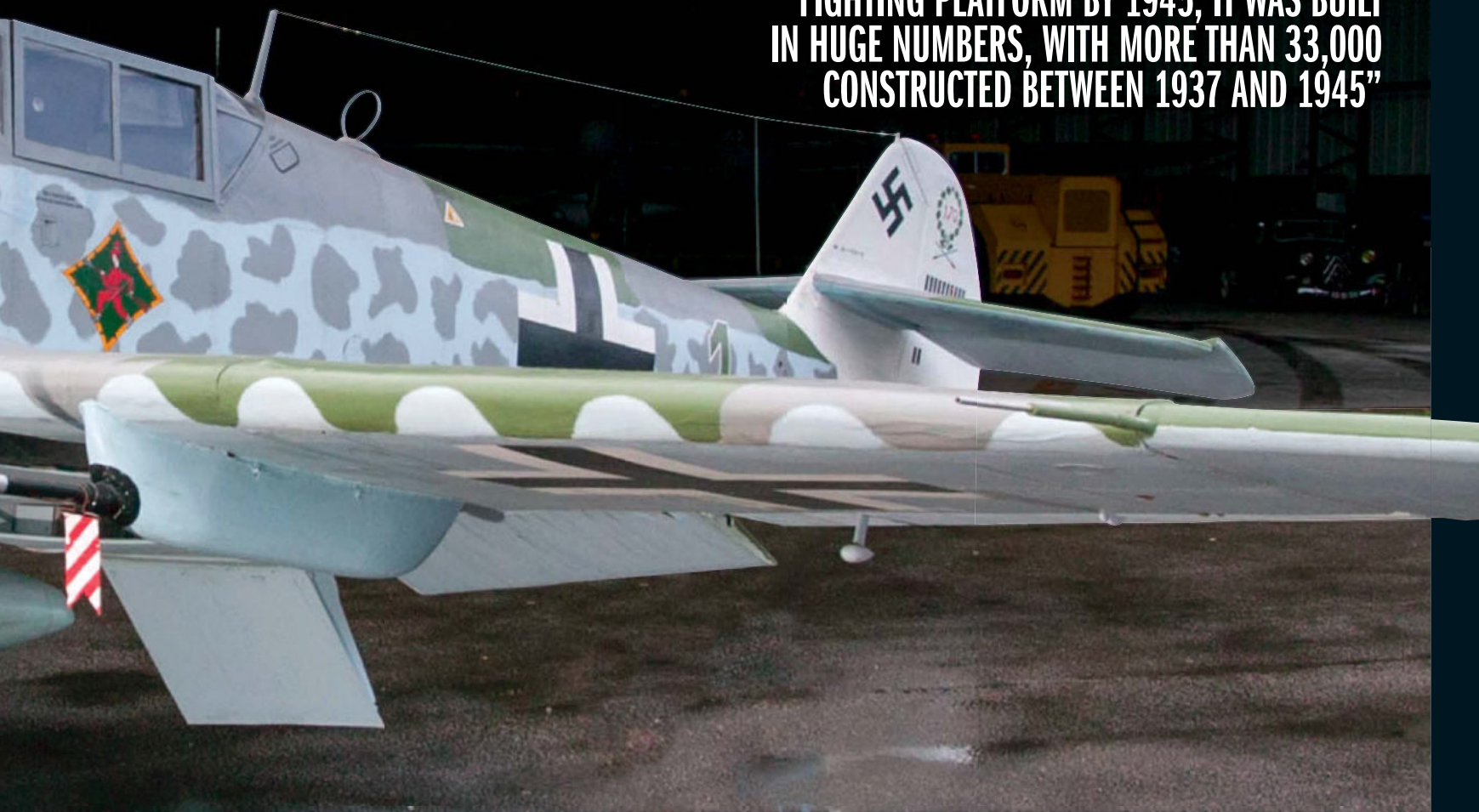
MAX TAKEOFF WEIGHT: 3,400KG (7,495LB)
POWERPLANT: 1 x DAIMLER-BENZ DB 605A-1
LIQUID-COOLED INVERTED V12, 1,455HP
(1,085KW)
PROPELLERS: VDM 9-12087 THREE-BLADED
LIGHT-ALLOY PROPELLER
PROPELLER DIAMETER: 3M (9FT 10IN)

BF 109G

Right: Though designed as a short range interceptor, Bf 109 variants served in many roles across all fronts



“WHILE ULTIMATELY NOT THE VERY BEST FIGHTING PLATFORM BY 1945, IT WAS BUILT IN HUGE NUMBERS, WITH MORE THAN 33,000 CONSTRUCTED BETWEEN 1937 AND 1945”



Fighting against its arch rival the Supermarine Spitfire, the Messerschmitt Bf 109 is probably the most famous Axis fighter of World War II. In the early years of the war, it was the main single-engine fighter interceptor of the Luftwaffe. While the E variant began to be outclassed by the Spitfire Mk IX after the Battle of Britain and was eventually replaced by the Focke Wulf 190, the Bf 109 in fact continued to serve across all fronts of German combat right until the war's end. While ultimately not the very best fighting platform by

1945, it was built in huge numbers, with more than 33,000 constructed between 1937 and 1945. The most numerous variant was the Bf 109G, with more than a third of all aircraft being this specification.

Originally designed as a short-range, high-speed, extremely agile interceptor, the Bf 109 was built in response to a tender by the German Reich Aviation Ministry in 1933. It was one of several specifications laid out by the Reich at the time that formed the future of the Luftwaffe as Germany prepared for war. Heinkel, Arado, BFW and Focke Wulf all

competed for the contract. The specification was for a fighter with a top speed of more than 400 kilometres per hour at 20,000 feet but with a flight endurance of only 90 minutes. The German Blitzkrieg warfare tactics at the time anticipated that close air support behind the main advancing front would be the main area of operations.

The Bf 109 made its debut in 1935 and played an active part in the Spanish Civil War, something that gave Luftwaffe pilots a crucial initial edge of combat experience at the outset of World War II.

DESIGN

The Bf 109 initially had a 700-horsepower Jumo V12, but when the prototypes were ready, the engines were behind schedule. The Bf 109 at first flew with a Rolls-Royce Kestrel engine, acquired by trading a Heinkel aircraft with Rolls-Royce, who needed an engine test bed.

Other advanced technologies included leading edge slats that deployed automatically to enhance combat manoeuvring. Early test pilots were wary of the design, with on-the-limit handling in steep combat turns becoming tricky. However, once mastered, the agility gave it an edge in air-to-air combat. Other elements that pilots disliked were the undercarriage arrangement and the fact that the canopy was designed to open sideways rather than slide back, meaning that it could not be opened in flight.

However, there is little doubt that the Messerschmitt was designed to survive combat. The engine was inverted, making it more difficult to damage by ground fire, while also giving the aircraft the ability to undertake negative-G manoeuvres in ways that Merlin-engined aircraft could not follow. The radiators had two separate systems that could be shut off independently in the event of damage, which allowed the pilot to continue flying. The aircraft would even continue to fly for five minutes with no radiators, giving the pilot a chance to escape from a dogfight if damaged.

Additionally, the fuselage fuel tank was behind the pilot and also behind the armour plating, reducing the possibility of penetration by gunfire and also burns to the pilot.

The initial Jumo engines were underpowered, with the Daimler-Benz engine eventually replacing it in a major redesign of the E series. The Bf 109E 'Emil' had major structural changes to accommodate the 1,100-horsepower Daimler-Benz engine. This model formed the basis for the G 'Gustav' series from 1942 onwards.

The design by Willy Messerschmitt used cutting-edge technologies at the time to create an extremely light monoplane design. Wherever possible, the number of components was minimised, with load-bearing structures such as engine and wing mounts being combined into one assembly. The unusual aircraft landing gear was also mounted on the same structure, which gave rise to the rather odd looking stance when on the ground. While it made the aircraft difficult to handle in landing and takeoff, it did allow the wings to be quickly removed with the gear in place, making for rapid battle damage repairs. The engine was a liquid-cooled V12, running inverted with the exhaust stacks at the bottom of the cowlings.

Additional cannon were added as a field modification to improve armament



The unusual undercarriage layout made the Messerschmitt tricky to handle on the ground

"THE DESIGN BY WILLY MESSERSCHMITT USED CUTTING-EDGE TECHNOLOGIES AT THE TIME TO CREATE AN EXTREMELY LIGHT MONOPLANE DESIGN"



This 100% accurate replica of the Bf 109G can be seen on display at the Yorkshire Air Museum



PERFORMANCE

MAXIMUM SPEED: 640KM/H (398MPH) AT 6,300M (20,669FT)
CRUISE SPEED: 590KM/H (365MPH) AT 6,000M (19,680FT)
RANGE: 850KM (528MI), 1,000KM (621MI) WITH DROP TANK
SERVICE CEILING: 12,000M (39,370FT)
RATE OF CLIMB: 17M/S (56FT/S)
WING LOADING: 196KG/M² (40LB/FT²)
POWER/MASS: 344W/KG (0.21HP/LB)

POWERPLANT

The Bf 109G was powered by the Daimler-Benz DB605 liquid-cooled V12 engine. This developed 1,475 brake horsepower and was the engine that would power the Messerschmitt variants for the rest of the war. The engine was a V12, inverted, liquid-cooled engine developed as a high-performance version of the earlier DB601. To keep pace with Rolls-Royce Merlin advances, this engine was designed to rev higher and run with greater supercharger boost

than previously, while still remaining reliable in combat and not overheating. The supercharger clutch was automatic, as was the electric pitch control for the propeller, giving the pilot less to worry about in the stress of combat situations.

Aviation fuel is typically 100 octane, but Daimler-Benz designed the engines to run at reduced power on lower octane fuels, even as low as 87 octane. This meant that in frontline combat where aviation fuel may be scarce, the aircraft could continue fighting using whatever fuel could be found.



The Daimler Benz liquid cooled inverted V12 was particularly robust and able to continue operating when damaged

ROLES AND DIVERSITY

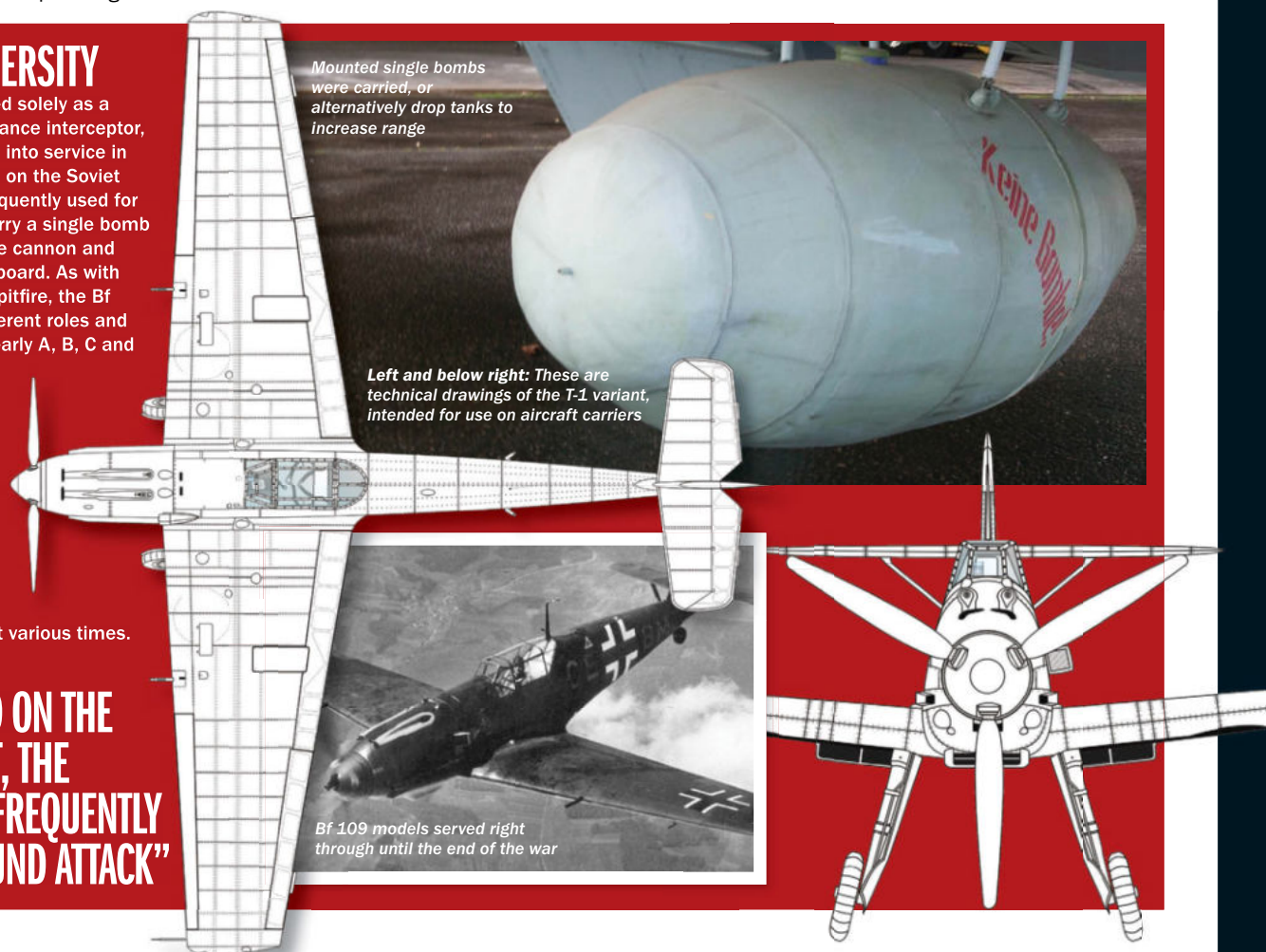
Though originally designed solely as a short-range high-performance interceptor, the Bf 109G was pressed into service in other areas. In Africa and on the Soviet front, the aircraft was frequently used for ground attack, able to carry a single bomb centrally in addition to the cannon and machine guns carried onboard. As with the Allied Supermarine Spitfire, the Bf 109 was adapted for different roles and environments. After the early A, B, C and D models, the Bf 109E was the first major overhaul, leading to the Gustav model here. A marine variant known as the T was produced in limited numbers, with additional small-scale productions of high-altitude photo-reconnaissance and even a two-seat trainer at various times.

"IN AFRICA AND ON THE RUSSIAN FRONT, THE AIRCRAFT WAS FREQUENTLY USED FOR GROUND ATTACK"

Mounted single bombs were carried, or alternatively drop tanks to increase range

Left and below right: These are technical drawings of the T-1 variant, intended for use on aircraft carriers

Bf 109 models served right through until the end of the war



The Bf109G had a central cannon firing through the propeller spinner



COCKPIT

The pilot sat in a seat designed to be used with a parachute. Armour plating behind him also covered the rear fuel tank for additional protection. Ahead was a bulletproof windscreen. The central-mounted cannon was also visible in the cockpit, which must have been deafening when in use. Pilots often criticised the cockpit canopy, both for the shallow frame that obscured vision and the fact that it hinged open sideways, meaning that it could not be opened in flight. In keeping with the compact design philosophy of Willy Messerschmitt, the cockpit was a tight fit.

Left: With a side-opening canopy, the cockpit was far harder to bail out of while in flight – an understandably unpopular feature with pilots

ARMAMENT

The thin, high-performance wing of the Messerschmitt Bf 109G meant that most of the armament was positioned centrally. Twin machine guns in the fuselage were supplemented by a 20mm cannon mounted in the centre of the V12 engine. This fired through the centre of the propeller spinner.

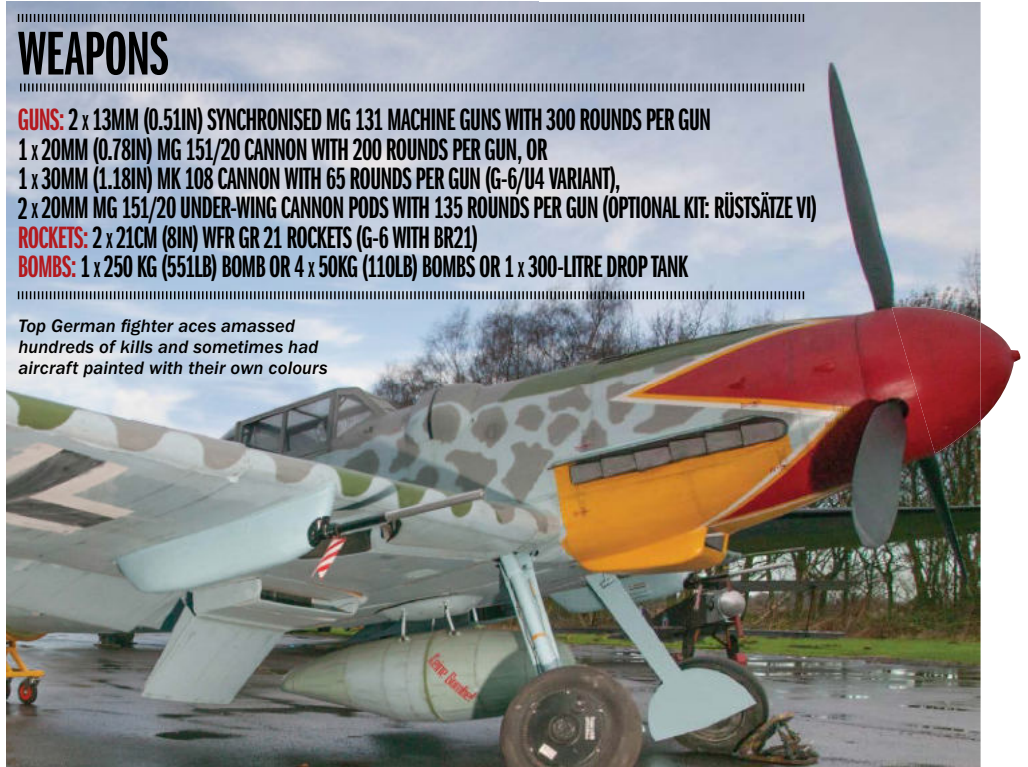
As the war progressed, this firepower was becoming ineffective, so the Luftwaffe

introduced field modifications known as Rüstsätze. This was typically a kit capable of being retrofitted in the field by ground crew. Such kits were generally mounted under the wing and included payloads such as extra cannon for ground attack, machine-gun pods or drop tanks to increase the limited range. This gave the aircraft additional diversity to enable the fight to continue, in particular on the Russian Front and in Africa.

WEAPONS

GUNS: 2 x 13MM (0.51IN) SYNCHRONISED MG 131 MACHINE GUNS WITH 300 ROUNDS PER GUN
 1 x 20MM (0.78IN) MG 151/20 CANNON WITH 200 ROUNDS PER GUN, OR
 1 x 30MM (1.18IN) MK 108 CANNON WITH 65 ROUNDS PER GUN (G-6/U4 VARIANT),
 2 x 20MM MG 151/20 UNDER-WING CANNON PODS WITH 135 ROUNDS PER GUN (OPTIONAL KIT: RÜSTSATZ VI)
ROCKETS: 2 x 21CM (8IN) WFR GR 21 ROCKETS (G-6 WITH BR21)
BOMBS: 1 x 250 KG (551LB) BOMB OR 4 x 50KG (110LB) BOMBS OR 1 x 300-LITRE DROP TANK

Top German fighter aces amassed hundreds of kills and sometimes had aircraft painted with their own colours



POST-WAR

Almost 34,000 Messerschmitt Bf 109s were built from 1935 until 1945, yet only about 100 survive today. Many are static, though some are still in flying condition. Most of those that survive were either captured by the Allies at the end of the war or recovered from combat areas of Russia and Eastern Europe, where they were abandoned and lost in large numbers at the end of the war.

A British soldier poses on top of a downed Bf 109 E, during the Battle of Britain



20

BLOODIEST BATTLES



From the hack-and-slash of ancient slaughter to the terrifying body counts of the world wars, here are some of the costliest defeats and victories in military history

WORDS NICK SOLDINGER

For the modern soldier, whether they're engaging the enemy with small-arms fire in a Damascus suburb or guiding a drone from the safety of a Californian air base, war is a claustrophobic experience, fought on a relatively small scale.

By contrast, from ancient times through to the 20th century, the experience of combat for most soldiers was something that occurred on a monumental scale. Rather than being part of a small team, they'd have been just another man in the ranks of a vast force sent to battle it out with another huge army. Epic clashes litter history – clashes that often resulted in colossal losses. Indeed, it wasn't uncommon for battlefields presided over by everyone from Caesar to Hitler to become mass burial grounds, with tens of thousands often butchered in a single day. As Wellington famously said after winning the Battle of Waterloo, "Nothing except a battle lost can be half so melancholy as a battle won."

It's not implausible that the killing of combatants on such a monstrous scale could ever happen again, but war, it appears, has changed forever. Resources and technology both play their part, but it's also just possible that the bloody lessons of history have finally been learned. Both politicians and generals alike now seem to have concluded that if war is unavoidable, then, like a disease, it should be contained. With that in mind, here are 20 of the bloodiest military disasters of all time.

Many of the retreating soldiers who were not killed in the fighting instead perished in the conditions on the Hindu Kush Mountains





BODY COUNT c. 4,500

I. RETREAT FROM KABUL

1842 BRITISH EMPIRE vs AFGHAN TRIBESMEN

HOW AN ARGUMENT OVER A WOMAN SPARKED ONE OF THE MOST HUMILIATING DEFEATS IN HISTORY AS THE GREAT GAME WAS BORN

In 1839, during an attempt to deter Russian imperial ambitions in India, Britain set out to create a bulwark in Afghanistan. They marched 20,000 troops into Kabul, ousted the country's leader Dost Mohammed and appointed local warlord Shah Shuja as the country's puppet ruler. The British force, under the command of two experienced political officers, Sir William MacNaghten and Sir Alexander Burnes, established a presence in a newly built base in the city that was to prove to have poor defences.

Within two years, however, the behaviour of the British had so antagonised the locals that an uprising seemed inevitable. Insurrection finally occurred in November 1841, after the favourite mistress of Afghan leader Abdullah Khan was taken to the house of a British officer. When Khan complained to Burnes but he failed to act, an angry mob broke into his house and murdered him.

The emboldened mob, now swelling in size, surrounded the British base. It vastly outnumbered the troops inside now under the leadership of MacNaghten, who managed to negotiate a truce. They agreed to leave the city peacefully, but as they did, the son of former leader Dost Mohammed, Muhammed Akbar Khan, arrived in Kabul with his own army. On 23 December, Khan killed MacNaghten and the British were thrown out of the country. They began their withdrawal on 6 January 1842, retreating back towards the British stronghold at Jalalabad 90 miles to the east.

Blighted by sub-zero temperatures and barren terrain, the forlorn column soon began to fall apart. By the time it reached the Hindu Kush Mountains, it had become easy pickings, and was subject to relentless attacks by local tribesmen. Of the 16,000 who left Kabul on 6 January, just one man – Assistant Surgeon William Brydon – made it to Jalalabad. Arriving bloodied and battered on the 13th, it is believed the Afghans let him go so that he could tell his grisly tale as a warning to others never to return.

THE AFTERMATH

The destruction of its army in Afghanistan by tribesmen was bitterly humiliating to Britain. With the loss of Kabul, remaining British troops were soon evacuated from the country. Imperial Russia now made its move, gradually expanding its borders south east towards India. The Great Game, as the strategic rivalry between Britain and Russia in the region became known, had begun and a second British invasion followed in 1878. It was to prove the start of a costly involvement in the territory that, in one way or another, would ensnare both Britain and Russia right through to the modern era.

2. CAPORETTO

1917 KINGDOM OF ITALY vs GERMAN REICH

THE USE OF CHEMICAL WEAPONS WAS THE KEY TO ONE OF THE MOST SIGNIFICANT MILITARY DEFEATS OF THE 20TH CENTURY

By the autumn of 1917, the Austro-Hungarian army had fought itself to a standstill against Italy along the European war's second front. Since May 1915, it had engaged Italian forces in 11 costly clashes but had failed to budge them from a battle line that followed the Isonzo River. The Germans, fearing their Austro-Hungarian allies were on the point of collapse, sent six divisions south to help initiate a decisive victory. At the Battle of Caporetto that followed, they launched a poison gas attack that was to prove the most successful of World War I.

At 2am on 24 October, the Germans began a huge artillery bombardment against the heavily fortified Italian line. Among the shells that smashed down into its defences were six tons of diphasgene gas. Although poison gas had been used against French and British troops as early as 1915, the Italians had little experience of what was then an entirely new weapon, and what masks they did have provided scant protection.

“IN ONE SECTOR, AN ENTIRE REGIMENT – THE ITALIAN 87TH INFANTRY – WAS EXTERMINATED IN MINUTES”

In one sector, an entire regiment – the Italian 87th Infantry – was exterminated in minutes. Elsewhere on the line, the troops, realising that if they stayed put they'd be annihilated, fled in terror. The Italian line that had stood firm for two and half years quickly collapsed. German and Austro-Hungarian forces rushed in to take advantage. Within weeks, the Italians had been driven back 60 miles, losing about 700,000 overall as casualties or desertion, including 270,000 taken prisoner.

Right: More than 500 Italians were killed by poison gas at Caporetto, while more than 500 times that many were taken prisoner by the Germans resulting in chaotic retreat

THE AFTERMATH

With its supply chain severely stretched, the German advance eventually ground to a halt at the Piave River, where a new stalemate was established. The damage the battle had done, however, was to have powerful political repercussions. The word 'caporetto' is still used by some Italians to describe a humiliating defeat, and the catastrophic reversal was to be consistently used in rhetoric after World War I to discredit the country's liberal state. It played a key role five years later in persuading the Italian people to abandon democracy altogether and embrace the tough-talking Benito Mussolini and his fascist dictatorship.



BODY COUNT c. 111,000 plus 30,000 wounded

3. ISANDLWANA

1879 BRITISH EMPIRE vs ZULU KINGDOM

ARROGANCE FUELLED BY A BELIEF IN TECHNOLOGICAL AND RACIAL SUPERIORITY LED TO THE MOST HUMILIATING DEFEAT IN BRITISH IMPERIAL HISTORY

On 11 January 1879, Lord Chelmsford led a 5,000-strong British column across from the British colony of Natal into Zululand, in South Africa. The invasion was primarily designed to seize territory. Chelmsford's force was armed with the latest Martini Henri rifles and artillery pieces, while the Zulus had only spears and shields to defend themselves.

Chelmsford had little respect for his enemy, and was so assured of success that he described them as "hopelessly inferior." It was to prove a foolish and arrogant underestimation. As Chelmsford's force pushed in to the country, the Zulu army commanded by their king, Cetshwayo, played hide-and-seek with them.

For nine days, mounted scouts searched but found nothing to destroy, as the Zulus lured them further and further into their territory. On 20 January, Chelmsford made camp at the foot of Isandlwana – an isolated narrow peak looming over wild savannahs. The following day, his reconnaissance units reported that they'd found what they were looking for – Zulus in the hills, 12 miles to the south.

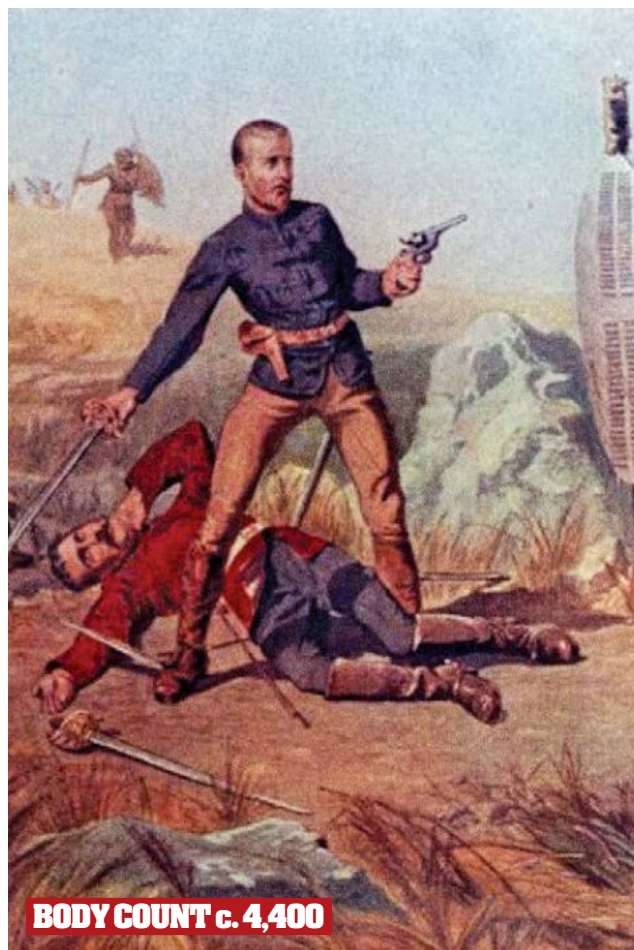
Early the next morning, Chelmsford split his force. Leaving 1,700 troops to guard his camp, he led the rest to confront the Zulu army. But he'd been tricked. Cetshwayo's main army was

actually hiding behind a ridge overlooking the camp at Isandlwana – all 25,000 of them.

At 11am, that almighty force swept down. Attacking the British in their classic charging-bull formation – a main body flanked by two phalanxes – they smashed into the British position. The redcoats fell back, and the Zulus slaughtered them between tents, upturned wagons and terrified horses. Four hours later, 1,400 of Chelmsford's troops lay dead in the grass. It was to prove one of Imperial Britain's worst defeats to an indigenous people in nearly 500 years of empire building.

THE AFTERMATH

The 1964 movie *Zulu* famously recounts how 139 Brits fought off 4,500 Zulus at Rorke's Drift in the wake of Isandlwana. But that heroic defence became part of British military folklore a lot earlier. The slaughter at Isandlwana was a PR disaster. It needed drowning out, and the noise the British government made about Rorke's Drift in the wake of Isandlwana did just that. Its military response, meanwhile, was equally cynical. Within six months, the Zulu Nation was no more – its warriors slaughtered by rapid-firing Gatling guns, its capital Ulundi torched, and its leader exiled.



BODY COUNT c. 4,400

4. SARIKAMISH

1914 OTTOMAN EMPIRE vs RUSSIAN EMPIRE

TURKEY'S CALAMITOUS ASSAULT ON SOUTHERN RUSSIA SET IN MOTION A SEQUENCE OF EVENTS THAT DESTROYED ITS OWN EMPIRE AND TRIGGERED THE FIRST MODERN GENOCIDE

At the outbreak of World War I, Germany's Kaiser Wilhelm enlisted the help of the fading Ottoman Empire. His plan was to inspire a global Jihad among the millions of Muslims living under British rule, and five days after hostilities broke out, he signed a secret pact with the Turkish leader Enver Pasha to help him achieve it.

Pasha was not particularly religious, but the idea of a Jihad appealed to him. He was keen to unite the Turkic people in a modern empire to supersede the flagging one he found himself presiding over, and Jihad seemed the ideal means to achieve that.

He immediately looked east towards a chunk of land that had once been Ottoman but had been seized by Russia in 1878. Desperate to retake what he saw as Turkish soil, he drew up plans to attack, and in December 1914, sent 120,000 troops over the Allahüekber Mountains with the aim of encircling the Russian Caucasus Army on the other side. It was an ill-conceived plan. The Russians retreated to Sarikamis before the Turks got there, leaving the notorious Russian winter to do their fighting for them. The Turks lost 25,000 men to the cold before even firing a shot.

At the start of January 1915, the Russians mounted a counter-offensive against the depleted, frostbitten Turks. By 7 January, Pasha's crusade had turned into a catastrophe. According to some estimates, Ottoman losses came to 90,000 dead, including 53,000 who'd frozen to death as the Russians chased them back towards their own borders.

THE AFTERMATH

Despite Pasha's claim that he was liberating Turkish territory, the region he'd invaded was actually a hotbed of ethnic friction, with Turks, Russians, Kurds, Georgians, and Armenian Christians scattered throughout. The last of these groups would pay heavily for Pasha's misjudgment.

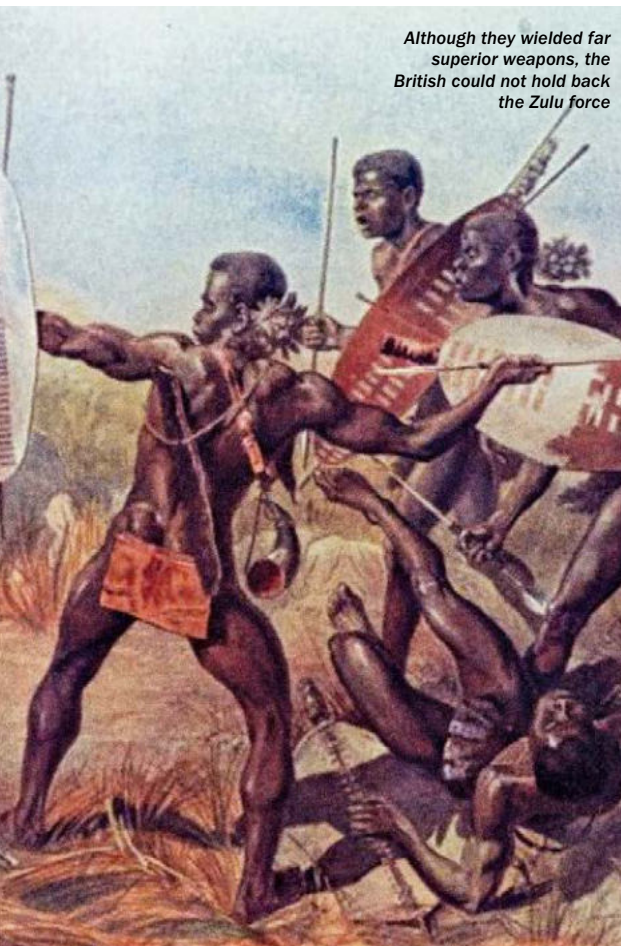
To explain his army's rout, Pasha invented a narrative by which his army had been 'stabbed in the back' by an Armenian resistance movement. Although no such thing existed, in April 1915 Pasha ordered that his men start exterminating the Armenians in the region. The result was the first modern genocide. It is estimated that more than 1.5 million innocent people were murdered, and at the end of the war, Pasha fled into exile while the Ottoman Empire vanished from the map.

An illustration from French newspaper 'Le Petit Journal' depicting the Armenian Genocide



BODY COUNT c. 110,000

Although they wielded far superior weapons, the British could not hold back the Zulu force



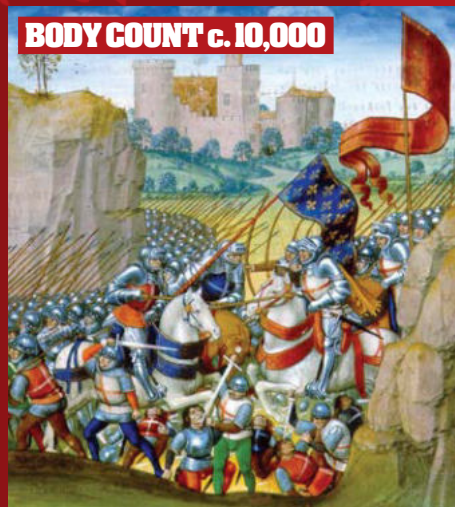
BODY COUNT c. 140,000

During the Siege of Alesia, Caesar's army constructed about 18 kilometres of four-metre-high fortifications in three weeks

**5. AGINCOURT**

1415 KINGDOM OF ENGLAND vs KINGDOM OF FRANCE
FRANCE'S KNIGHTS DESTROYED BY ARROWS

One of the most celebrated English victories ever came during the Hundred Years' War when the 9,000-strong army of England's King Henry V overcame a French force that some have estimated was as strong as 36,000. The fighting took place on a strip of muddy ground sandwiched between two woods. When French knights who'd tried to charge the English lines became bogged down in the mud, Henry's archers opened up on them with a barrage of arrows. Approximately 10,000 Frenchmen were slain.

BODY COUNT c. 10,000

Above: The Battle of Agincourt remains one of England's most celebrated military victories and its spirit has been invoked in times of national crisis for centuries

6. SIEGE OF ALESIA

52 BCE ROMAN REPUBLIC vs GAULISH TRIBES

HOW JULIUS CAESAR DELIBERATELY TRAPPED HIMSELF BETWEEN TWO HUGE GAULISH FORCES AND DEFEATED THEM TO CONQUER THEIR COUNTRY

One of history's most bizarre battles was fought in 52 BCE in Gaul, present-day France. The armies of Julius Caesar, who were in the final stages of conquering the country, had hunted the Gaulish leader Vercingetorix and his 80,000-strong army down to the hilltop citadel of Alesia, near Dijon.

Caesar and his army now lay siege, surrounding the city with a series of fortifications consisting of mantraps, watchtowers, 12-foot ramparts, and two 15-foot-wide, 15-foot-deep ditches that, at ten miles long apiece, encircled the entire hilltop. Remarkably, this huge engineering project took 15,000 of his 60,000-strong force just three weeks to construct. With Vercingetorix now trapped inside, Caesar began to starve him out.

During the early days of the siege, however, a messenger carrying a letter from Vercingetorix had managed to sneak through Roman lines and get word of the impending calamity to other tribal leaders. When Caesar received news that a huge Gaulish relief army of at least 100,000 was headed his way, however, he didn't budge. Instead, he instructed his men to build another similarly huge barricade around his own army facing outwards. With his troops effectively walled in, there could be no escape – they would either fight and win on two fronts or die.

After two months of the besiegers themselves being besieged, the Gauls

launched a simultaneous attack from both within the citadel and outside Caesar's barricade. There should have only been one winner, but Caesar's defences proved impregnable and his battle tactics superior. The Gauls were routed, losing upwards of 130,000 men in the fighting that followed.

“WITH HIS ARMY EFFECTIVELY WALLED IN, THERE COULD BE NO ESCAPE – THEY WOULD EITHER FIGHT AND WIN ON TWO FRONTS OR DIE”

THE AFTERMATH

As ruthless in victory as he'd been in battle, Caesar ordered that 2,000 warriors of the thousands he'd captured have both their hands cut off. They were then sent back to their villages as a warning to others against further insurgency. Gaul was now gobbled up into the Roman Republic, Latin adopted as the official language and thousands enslaved. It remained under Roman rule until the fall of the Western Empire. Vercingetorix was held captive for five years before Caesar brought him to Rome, paraded him through the street in chains, then had him strangled in front of a bloodthirsty mob.

7. BAGRATION

**1944 NAZI GERMANY
vs THE SOVIET UNION**

WHEN THE RUSSIAN ARMY LAUNCHED ITS VERY OWN D-DAY, STALIN DEALT HITLER A KILLER BLOW

June 1944 is best remembered in the West for the D-Day landings, but on the Eastern Front, that moment in history saw an operation that dwarfed what was happening in Normandy. On 22 June, the Red army launched a mammoth offensive against the Axis forces then occupying Belorussia. Germany's Army Group Centre under Hitler acolyte Field Marshal Ernst Busch had held the line there more successfully than Germany's Army Group North in the Baltic States, and their Romanian and Hungarian allies to the south in Ukraine. The result was 'the Belorussian bulge' – a salient in the centre of the Axis forces' front line. It was this bulge that the Soviets attacked. Hitting it with a total of 2.3 million men supported by almost 3,000 tanks, 10,500 heavy artillery pieces and more than 2,300 aircraft.

Assisted by a growing army of partisan fighters who'd formed in response to the brutal Nazi occupation and subsequent atrocities, they took the Germans totally by surprise. Nazi forces were surrounded and annihilated while the front line was swept back 450 miles in just five weeks, through Minsk all the way to the outskirts of Warsaw. Hitler's Army Group Centre was effectively gutted in the process. Nearly 20 German divisions were destroyed, while another

**BODY COUNT c. 1,100,000
plus 600,000 wounded**



Above: Soviet troops almost completely destroyed an entire German army group during Bagration

50 were severely mauled. In just over one month an estimated 300,000 German soldiers were killed, 250,000 were wounded and 120,000 were captured. It was a greater defeat than even the disastrous Battle of Stalingrad that the Germans had suffered the year before, and would become Nazi Germany's greatest military disaster of the war.

THE AFTERMATH

Operation Bagration – named after a tsarist general who'd fought Napoleon's invading armies more than 100 years before – was the knockout blow for Hitler on the Eastern Front. While he might not have accepted it, many of those he led knew what was coming, and his own generals even attempted to assassinate him on 20 July as part of the failed Valkyrie coup attempt. The operation also redrew the map of Europe, establishing the Soviet Union as de facto ruler of most of Eastern Europe for the next 45 years, as Stalin's troops and tanks seized Sofia, Bucharest, Warsaw, Budapest, and eventually Berlin.

BODY COUNT c. 200,000

Cortés's conquistadors managed to capture the Aztec capital after a brief siege, killing about 200,000 people in the process



8. TENOCHTITLAN

1521 KINGDOM OF SPAIN vs AZTEC EMPIRE

HOW 1,000 CONQUISTADORS OVERCAME THE MIGHT OF THE AZTECS

In 1519, Spanish conquistador Hernán Cortés led an expedition of about 1,000 men to secure Mexico as a Spanish colony. After a series of misadventures with the Aztecs that he was lucky to survive, Cortés eventually raised a huge army, mostly of indigenous people disgruntled with Aztec rule, and set about capturing the Aztec capital Tenochtitlan.

Then considered to be the largest city in the world with a population of about 300,000, Tenochtitlan stood on an island surrounded by the swampy waters of Lake Texcoco, and was only accessible from land by a series of well-guarded causeways.

Cortés – having previously visited the city – knew that these heavily defended causeways would make his attack vulnerable, so had 13 brigantine sailing ships brought across the

land in pieces and assembled on the lakeside. Arriving on 26 May 1521, he now laid siege to the city, preventing the food-bearing canoes that supplied its citizens from crossing the lake. As the conquistador's stranglehold on the city tightened, starvation set in. The local defenders, already blighted by a smallpox epidemic that had arrived with the Spaniards two years before, now gradually began to lose control of the routes that led into the city.

Eventually the conquistador army managed to breach the city's walls, and fighting erupted in Tenochtitlan's streets. Although the Aztecs fought fiercely, defending every house, they were weakened by starvation and illness, and on 13 August, finally surrendered to Cortés, by which time more than 100,000 Aztec warriors and 100,000 civilians had been killed.

“THE LOCAL DEFENDERS, ALREADY BLIGHTED BY A SMALLPOX EPIDEMIC THAT HAD ARRIVED WITH THE SPANIARDS TWO YEARS BEFORE, NOW GRADUALLY BEGAN TO LOSE CONTROL OF THE ROUTES THAT LED INTO THE CITY”



Many of the captured troops ended up working on the infamous Burma railway

BODY COUNT c. 5,000 Commonwealth, c. 2,000 Japanese, 100,000 civilians massacred, plus 80,000 POWs

9. SINGAPORE

**1942 BRITISH EMPIRE
vs EMPIRE OF JAPAN**

THE BRITISH SURRENDER THAT BECAME ITS COSTLIEST DEFEAT

Singapore was the British Empire's 'Gibraltar in the East' – a great island fortress believed to be impregnable by the British even when Japanese forces began steamrolling down the Malay peninsular towards it in January 1942.

Although the Allied garrison there was more than twice the size of the Japanese army it would soon face, most were inexperienced conscripts fresh off the boat. They were also hopelessly under-supplied in terms of food and water. Such a huge force – 85,000 – was never going to be sustainable in a drawn-out siege.

By 3 February, the Japanese began shelling Singapore from the mainland and attacking it from the air. General Percival, the garrison commander, immediately had the causeway connecting Singapore to the Malay peninsular destroyed to prevent the Japanese using its roads. This postponed Japanese attacks for a week, and preparations for an amphibious landing were soon being made. Percival guessed that the Japanese would assault the north east of the island where the Johore Strait sea crossing was at its narrowest, and concentrated the bulk of his forces in this part of the island. It was to prove a huge mistake.

On the night of 8 February, the first waves of Japanese troops began crossing the strait to the north west, landing 13,000 men and quickly overwhelming the 3,000 Allied troops Percival had assigned to defend the beaches there. A further 23,000 Japanese soldiers would follow them, largely unopposed, and after a week of fierce fighting, Percival surrendered to save his force being annihilated.

THE AFTERMATH

About 5,000 Allied soldiers were killed during the fighting – including scores bayoneted by Japanese troops in the Alexandra Hospital Massacre as they lay wounded in their beds. The remaining 80,000 were taken prisoner, with many sent to work as slave labourers on the notorious Death Railway built between Thailand and Burma from 1943 onwards, which killed more than 12,000 Allied personnel. The fall of the garrison was the biggest surrender of British-led forces in history. In the weeks following the surrender, up to 100,000 Singaporean civilians were executed by the occupying Japanese in the Sook Ching 'cleansing' massacres.

10. HASTINGS

1066 ANGLO-SAXONS vs NORMAN FRENCH

THREE MEN CAME FOR ENGLAND'S CROWN; THERE COULD BE ONLY ONE WINNER

When Anglo-Saxon King Edward the Confessor died leaving no heir, several men stepped forward to seize England's throne. These included Anglo-Saxon nobleman Harold Godwinson, Norwegian King Harald Hardrada and French Duke William of Normandy.

Grabbing the initiative, Godwinson had himself crowned King Harold I shortly after Edward's death in January 1066, and by 25 September he'd defeated his Norwegian rival Hardrada and his invading army of Norsemen at the Battle of Stamford Bridge in East Yorkshire. Just three days later, however, having just marched his army all the way up the country from the south coast to contest the battle, he now had to march what was left of it back down again, to repel William who'd just landed with his army in Sussex. On 14 October 1066, the Anglo-Saxon and Norman armies – each

numbering about 10,000 – met seven miles north west of Hastings at a place that has been known ever since quite simply as Battle.

Not only was his force fresher than his rival's, but William's men had compositional advantages over the Anglo-Saxons. While Harold's warriors were mostly made up of infantrymen known as housecarls, armed with battle axes and shields, William's troops were much more mixed. Half of his force may have been similarly armed foot soldiers, but the rest were split equally into archers and mounted knights, and these were to make the difference. The battle, which raged all day, was won by William when Harold was famously killed by an arrow and his army retreated in chaos.

Below: The 70-metre-long 'Bayeux Tapestry' celebrates William the Conqueror's famous victory over Harold

BODY COUNT c. 6,000



11. ADWA

1896 KINGDOM OF ITALY vs ETHIOPIAN EMPIRE

ANOTHER EUROPEAN ARMY DEFEATED IN AFRICA BY ITS OWN HUBRIS

By the end of the 19th century, most of Africa had been carved up and claimed by European powers. One notable exception to this was Ethiopia, and the relatively new nation of Italy was keen to add it to its slender colonial portfolio, which already included neighbouring Eritrea and Somalia.

By the start of 1896, Italian troops commanded by General Baratieri had invaded Ethiopia only to find they were soon running low on supplies. Faced with the prospect of a dishonourable retreat back into Eritrea, Baratieri instead decided to attack the much larger Ethiopian force assembled against him.

Although he was outnumbered six to one – he commanded a force of about 18,000 while the Ethiopian army under Emperor Melenik was estimated at 120,000 – Baratieri believed that his superior weapons and battle tactics would win the day.

The plan was to advance the Italian army in three columns in parallel formation so that they could create waves of cross fire to cut their technologically disadvantaged enemy down. During the night of 29 February,

he moved his troops into position for battle at first light. When dawn broke, however, it was clear that in the dark the three columns had become too spread out. One column then wandered directly into Melenik forces, who'd been watching them from hills as they marched into the Adwa valley. Heavily outnumbered, this column was wiped out within hours. The other two columns were then attacked and overwhelmed in two separate and bloody encounters, with the last one cut to pieces as its men ran for their lives.

THE AFTERMATH

The Italians suffered 8,500 casualties in the battle, with a further 3,000 taken prisoner. Although Menelik's force had suffered about 12,000 casualties, it was still a fighting force, and one now strengthened by hundreds of rifles and artillery pieces taken from the defeated Italians. As a direct result of the battle, Italy signed the Treaty of Addis Ababa, which recognised Ethiopia as an independent state. Ethiopia enjoyed its status as such for another 40 years – until the Italians, this time under Benito Mussolini, returned with tanks, aircraft and chemical weapons. Ethiopia was then occupied by Italy from 1936–41.

Emperor Menelik II at the Battle of Adwa



BODY COUNT c. 25,000 plus 8,000 wounded

12. VERDUN

1916 FRENCH REPUBLIC vs GERMAN REICH

HOW ONE GENERAL'S THIRST FOR BLOOD SAW THOUSANDS KILLED

At 303 days, this was World War I's longest battle. German chief of staff Erich von Falkenhayn declared he would "bleed France white" by attacking an area of eastern France that held historic significance for the French. Artillery, air support and flamethrowers were all used in huge numbers to crush a French army determined to defend its land. By the time the Somme offensive switched the German focus, French losses exceeded 360,000, with the Germans losing a similar number.

BODY COUNT c. 800,000 plus c. 350,000 wounded



The German plan at Verdun was simple: exterminate as many French soldiers as possible to prevent France from fighting on. It didn't work

13. SIEGE OF BAGHDAD

1258 MOGUL EMPIRE vs ABBASID CALIPHATE

THE EMPIRE'S SHOW OF STRENGTH SAW AN ENTIRE CITY SLAUGHTERED

One of history's most barbaric acts took place in the 13th century when Mongol hordes attacked Baghdad. After a 12-day siege, Genghis Khan's grandson Hulagu Khan demanded that the city's 50,000 defenders surrender to his force of 150,000. Hoping for clemency, they agreed. This was to prove a big mistake. As well as slaughtering them all, Khan also put as many as 2 million civilians to the sword as his warriors ran rampage through the city. None of the city's inhabitants are thought to have survived the ensuing bloody massacre.

Right: When Hulagu Khan's Mongol army attacked Baghdad, they attempted to murder every last person living within the city



BODY COUNT c. 50,000 plus c. 2 million civilians

14. FIRST DAY OF THE SOMME

1916 BRITISH EMPIRE & FRENCH REPUBLIC vs GERMAN REICH

THE BIGGEST CALAMITY IN BRITISH MILITARY HISTORY THAT LEFT A GENERATION HAUNTED

BODY COUNT c. 60,000 plus c. 40,000 wounded

Many of those who went over the top on the first day of the Battle of the Somme had never seen action before. Many never came back

Think of a military disaster and the Battle of the Somme is probably the first name that springs to mind. The events that unfolded on the battle's opening day are among the most notorious in history. On 1 July 1916, a week-long bombardment that saw 1.7 million artillery shells fall on the German front line in France's Somme Valley climaxed when two giant mines – which had been planted beneath German trenches via elaborate tunnel systems – were detonated.

The blasts were so loud it was said the explosions could be heard in London 200 miles away. There was then a delay of two minutes before whistles were blown and 120,000 British troops clambered out of their trenches and began wandering across no man's land.

The bombardment had been so intense that the British High Command believed few German defenders could have survived it. They were so confident, in fact, that their infantry – mostly volunteers, mostly new to war, and for the most part carrying full kit – were told to walk not run to the German lines.

The German trench systems, however, were engineering masterpieces supported by deep subterranean dugouts that had kept the majority of its front-line troops safe. When the bombardment eventually lifted, its survivors raced to the surface, lined up the advancing waves of British Tommies in their sights and, in crossing enfilades of machine-gun fire, scythed a generation down. By the end of the day, the British had sustained more than 57,000 casualties, with nearly 20,000 killed.

“THE BOMBARDMENT HAD BEEN SO INTENSE THAT THE BRITISH HIGH COMMAND BELIEVED FEW GERMAN DEFENDERS COULD HAVE SURVIVED IT”

15. OPERATION MARKET GARDEN

1944 THE ALLIES vs NAZI GERMANY

A FLAWED PLAN THAT GAVE BIRTH TO THE LARGEST AIRBORNE OPERATION IN HISTORY

Field Marshal Bernard Law Montgomery's two-part plan was simple. Lay a carpet of airborne troops across Holland, getting them to seize vital bridges (Operation Market), and then have an armoured division race along the highway that connects them, relieving the paratroopers in the process (Operation Garden). The war against Hitler would be over by Christmas. That was the theory anyway.

Two US airborne divisions, the 82nd and the 101st, were assigned to take the bridges around Nijmegen and Eindhoven respectively. The British First Airborne Corps, meanwhile, would capture the northernmost bridge at Arnhem, giving direct access into Germany.

With Hitler's forces in full retreat on both fronts, it was thought that resistance in Holland would be minimal. Montgomery believed that Britain's First Guards Armoured Division that he'd assigned to the Garden part of the plan could reach Arnhem – 120 kilometres away – within 48 hours. On 17 September, what was to be the largest airborne operation in history was launched when about 30,000 British and US paratroopers landed all over Holland.

At the same time, Britain's XXX Corps, which was spearheading the armoured advance, began rolling down

what was soon nicknamed 'Hell's Highway' due to the defences along it.

While the tanks did reach US troops at Nijmegen and Eindhoven, it never did relieve the British paratroopers at Arnhem, who were left fighting alone for a week against an overwhelming enemy that included two SS Panzer divisions that just happened to be in town for a refit.

THE AFTERMATH

Although Field Marshal Montgomery claimed that Market Garden had been “90 per cent successful,” the overall operation was a failure – the staggering courage of the British First Airborne division left stranded at Arnhem notwithstanding. Allied casualties numbered in excess of 17,000 with nearly 7,000 British paratroopers captured after they'd fought down to the final bullet. Montgomery's daring gamble had been a huge use of resources, and by the time it was over, the exhausted Allied advance ground to a virtual halt, allowing Hitler to launch his final great counter-offensive of the war through the Ardennes Forest in the winter of 1944-5.

BODY COUNT c. 24,000

Lightly armed British paratroopers pick their way through the rubble at Arnhem. They were told to expect light resistance – they ended up confronting tanks



While the Spanish Armada maintained its defensive crescent formation, Drake found it hard to attack, managing to sink only two galleons as it sailed through the English Channel

BODY COUNT c. 2,200



16. GRAVELINES

1588 KINGDOM OF ENGLAND vs HABSBURG SPAIN

ENGLAND TOOK ADVANTAGE OF THE UNPREPARED SPANIARDS TO CRUSH THE ARMADA

By the late 16th century, tensions between Protestant England and Catholic Spain had reached boiling point. A combination of English support of Protestants in the Netherlands – then ruled by Spain – and the incessant plundering of Spanish ships returning from the new world by English pirates convinced Spain's King Phillip II to invade England.

In August 1588, a huge fleet of about 130 ships set sail from Lisbon. Its mission was to sail to the Spanish Netherlands, pick up extra troops and then land in England.

As it passed the Isles of Scilly, however, it was spotted and a series of warning beacons were lit. Elizabeth's court in London were soon warned of what was headed her way.

As the armada, led by the Duke of Medina Sidonia, sailed up the English Channel in a distinctive defensive crescent formation, it came under attack from an English force led by Sir Francis Drake, however, it managed to remain largely unscathed.

Reaching the continent, Sidonia realised there was no port in the Netherlands deep enough to accommodate his fleet, so he anchored off of Gravelines near modern-day Calais instead and waited for the rest of his invasion force to meet him there. No longer in their defensive crescent, his fleet was now vulnerable to attack. Drake sent in eight fire ships of "Hell Burners" – literally floating bombs – and the Spanish fleet fled.

17. TOWTON

1461 HOUSE OF YORK vs HOUSE OF LANCASTER

NO QUARTER WAS GIVEN ON ENGLAND'S BLOODIEST BATTLEFIELD

Palm Sunday was anything but a holy affair on 29 March 1461, as the forces of Lancaster and York lined up against each other for the latest bloodletting of the Wars of the Roses. In the midst of a raging snowstorm, the ranks of the Yorkist bowmen loosed volley after volley with the wind at their backs, giving extra strength to the flight of their arrows.

Unable to respond with their own archers, whose volleys faltered in the oncoming gusts, the Lancastrians advanced into the arrow storm. In the ensuing mêlée, noblemen and commoner alike clashed with characteristic Medieval ferocity. Edward IV's victory came at the cost of upwards of 15,000 lives, lost to the bloodied Yorkshire snow.

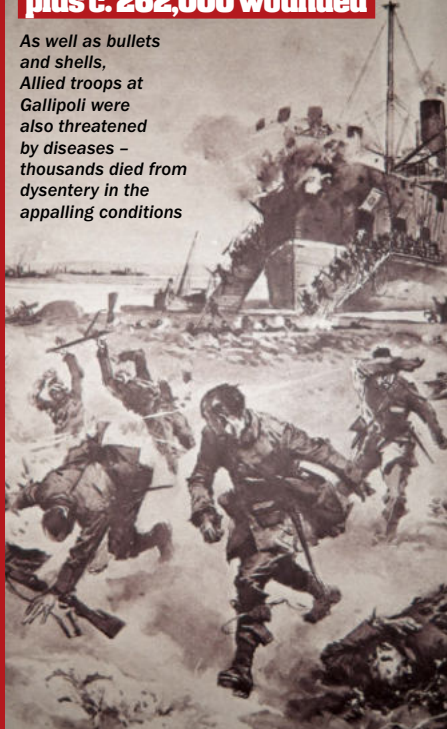


The Battle of Towton saw Edward, Duke of York, become the first Yorkist king

BODY COUNT c. 15,000

BODY COUNT c. 130,000 plus c. 262,000 wounded

As well as bullets and shells, Allied troops at Gallipoli were also threatened by diseases – thousands died from dysentery in the appalling conditions



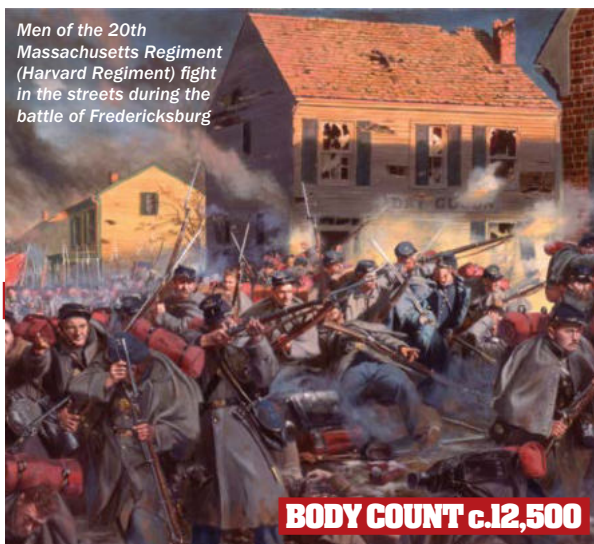
18. GALLIPOLI CAMPAIGN

1915 TRIPLE ENTENTE vs THE OTTOMAN EMPIRE
THE DISASTROUS AMPHIBIOUS ASSAULT THAT WOULD HAUNT CHURCHILL FOR YEARS

In 1915, Winston Churchill, then Britain's first lord of the Admiralty, was convinced that the triple entente needed to open a second front against Germany's ally the Ottoman Empire. On 25 April 1915, the first of 500,000 Australian, New Zealander, French, African, Indian, Canadian but mainly British soldiers hit the beaches along the Gallipoli peninsula. Eight months later, having achieved nothing, they left. After becoming locked into a stalemate on the Turkish coast, calamitous leadership, disease and murderous heat had led to more than half the force becoming casualties.

"AFTER BECOMING LOCKED INTO A STALEMATE ON THE TURKISH COAST, CALAMITOUS LEADERSHIP, DISEASE AND MURDEROUS HEAT HAD LED TO MORE THAN HALF THE FORCE BECOMING CASUALTIES"

Men of the 20th Massachusetts Regiment (Harvard Regiment) fight in the streets during the battle of Fredericksburg



BODY COUNT c. 12,500

THE AFTERMATH

After the defeat, the Union's President Lincoln came under increasing criticism from both the press and politicians. Union morale, already low, plummeted, while Burnside's calamitous strategy and poor leadership sowed the seeds of insubordination within his army's ranks. This was to blight his next offensive against Lee, the so-called Mud March in January 1863. Its failure convinced Lincoln that Burnside should go. He replaced him with the equally unsuccessful General Joe Hooker before appointing General George Meade – a commander who finally proved capable of matching Robert E Lee's brilliance, defeating him at the Battle of Gettysburg in 1863 and turning the tide of the war.

19. FREDERICKSBURG

1862 UNITED STATES UNION vs CONFEDERATE STATES

HOW TACTICAL NAIVETY AND POOR LEADERSHIP LED TO A NEEDLESS SLAUGHTER

In what was the most one-sided battle during the American Civil War, more than 100,000 Union troops under the command of General Ambrose Burnside attacked Confederate positions outside the town of Fredericksburg in Virginia. Compared to its enemy, the 80,000-strong Confederate force was poorly fed and poorly equipped but it had the distinct advantage of being under the command of the brilliant General Robert E Lee.

Lee had placed his troops in what he rightly believed to be an impregnable position in the hills above Fredericksburg. On 13 December 1862, Burnside – under pressure from US President Abraham Lincoln to attack – staged a foolhardy full-frontal assault. Under punishing

fire, his troops crossed the Rappahannock River in barges to take the town of Fredericksburg. Two days later, he then sent his men up into the high ground to assault the Confederate forces' entrenched position.

The necessity of holding the high ground in a battlefield is one of warfare's oldest lessons, and it was one not lost on Lee. He repelled wave after wave of Union attacks by sending sweeping volleys of gunfire down into the assaulting Northern troops. In less than two hours, more than 6,000 Union soldiers were wiped out. "It is well that war is so terrible," Lee was heard to say during the fighting, "otherwise we should grow too fond of it." By the end of the battle, Union casualties had grown to more than 12,500 men.

20. HIGHWAY OF DEATH

1991 UNITED STATES AND CANADA vs IRAQI REPUBLIC

A FINAL BLOW TO RETREATING FORCES IN WHICH THOUSANDS ARE KILLED

One of modern history's most memorable – and shocking – slaughters occurred in 1991. Highway 80, the six-lane motorway that leads out of Kuwait and into Iraq, became one of history's most infamous killing grounds.

During the First Gulf War, when Iraqi troops occupying Kuwait were expelled by a US-led

coalition, US and Canadian aircraft blitzed a convoy of vehicles along the road as they fled back across the border.

It's thought that up to 10,000 Iraqis were incinerated. The devastation was so shocking that US President Bush Sr ended hostilities the next day.



As Saddam Hussein's troops hurried back across the border in any vehicle they could find, US and Canadian pilots bombed them from the air

BODY COUNT c. 10,000

Images: Alamy; Corbis; Getty; Thinkstock

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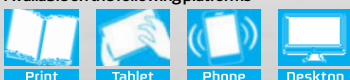


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BATTLE ROYAL

"THIS PERIOD OF ENGLISH HISTORY REALLY IS THE STUFF OF HIGH DRAMA"

Writer: Hugh Bicheno **Publisher:** Head of Zeus

Price: £25 **Released:** Out now

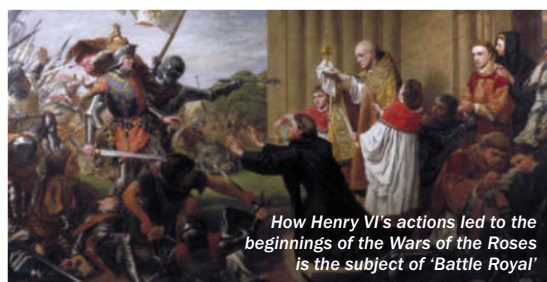
MEDIEVAL POWER GAMES AROUND IN THIS BLOODY ACCOUNT OF ENGLAND'S MOST COSTLY CIVIL CONFLICT - THE WARS OF THE ROSES

Subtitled 'The Wars Of Lancaster And York, 1440-1462' this is part one of a two-part study that seeks to unravel the dynastic struggle for England's throne between the Houses of Lancaster and York in what became known as the Wars of the Roses.

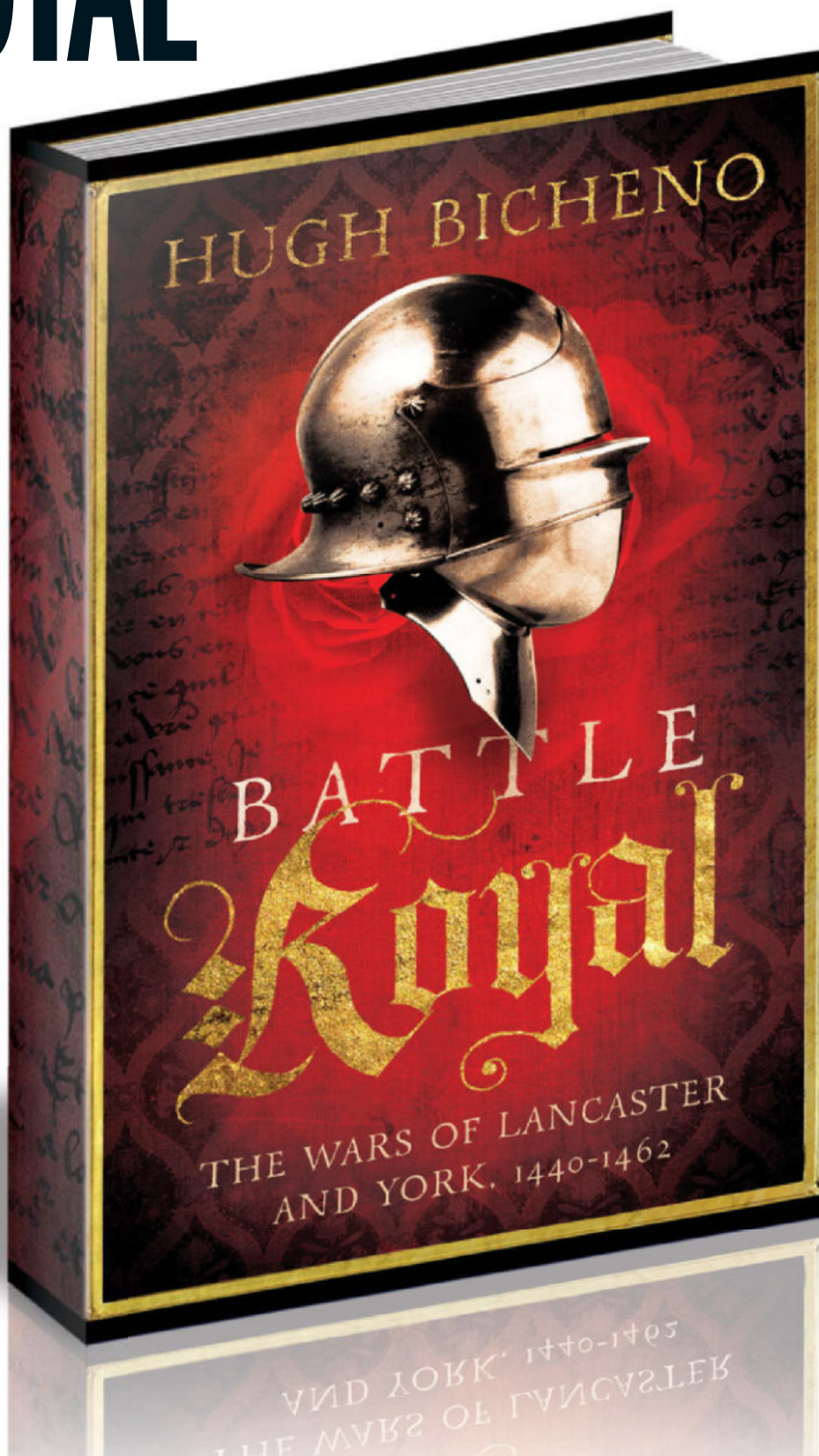
The book opens by introducing us to King Henry VI who, in the wake of his failed military campaigns in France, is suffering from what the author Hugh Bicheno describes as schizophrenia. Whatever the correct definition of Henry's mental condition, it is clear that he is ill suited to leading either a foreign campaign or his own country.

Embarrassing and costly military defeat abroad is soon followed by growing disorder at home, as Henry's grip on both reality and his kingdom begins to slide. Step forward the king's ambitious cousin Richard of York, who many now begin to rally around believing him to be the man most fit to rule the country. It is not a situation Henry's equally ambitious wife Margaret of Anjou is prepared to accept. She is pregnant with Henry's son and makes a shadowy agreement with Richard that involves giving him a leading role in the running of the country in exchange for an assurance that, when the time comes, her child's birth right will be protected. Just as her plan is being put into place, however, Henry recovers and rips her agreement with Richard. It's a decision that sets England irrevocably on course for all-out civil war, and one that turns out to be the longest and bloodiest in the nation's history.

This period of English history really is the stuff of high drama, and Bicheno's version of it doesn't disappoint. Compellingly told, this book brings late Medieval England thrillingly back to life in such gory detail that you can almost smell the blood and muck.



How Henry VI's actions led to the beginnings of the Wars of the Roses is the subject of 'Battle Royal'



BLETCHLEY PARK CLUEDO

Price: £29.99 **Released:** Out now **DILLY KNOX, IN HUT 6, WITH THE... ENIGMA MACHINE!?**



Bletchley Park's story, and its importance for the Allied war effort, have only relatively recently been brought to the public's attention. Now, it's received the Cluedo makeover. In this special edition of the familiar family game, players investigate the murder of intelligence officer John Blackcross. Under suspicion are six members of the Bletchley Park team, including Dilly Plum (based on real-life code-breaker Dilly Knox) and Gordon Green (Gordon Welchman, manager of the park's Hut 6). Sadly, the peerless Alan Turing doesn't feature –

presumably he was just far too important to be under accusation (or else he covered his tracks well).

The murder weapons, or rather the pieces of 'evidence', include a Bombe Drum, an Enigma machine, Morse code key, motorbike, typewriter and golf clubs – all the paraphernalia you'd expect to find in any successful secret code-breaking outfit. The board that players explore to track down Blackcross's killer is a fictitious plan of Bletchley itself, including its huts, ballroom and canteen. As all seasoned Cluedo veterans will know, secret passages can also be found linking certain rooms together across the board.

The sheer novelty of exploring the Cluedo board, while making accusations of murder using a cryptanalytic machine as evidence, will be a delight to any history nerd. Available exclusively from the Bletchley Park website (www.bletchleypark.org.uk), all proceeds from the game go to the Bletchley Park Trust.

AFTERSHOCK

Writer: Matthew Green **Publisher:** Portobello Books

Price: £20 **Released:** Out now

A CONSIDERATE AND MEANINGFUL LOOK AT THE LIVES OF SOLDIERS AFTER THEY RETURN FROM THE HORRORS OF WAR

For many who return home from frontline combat, the passing of one loud, terrifying fight too often heralds the arrival of a silent, equally disturbing new struggle. Aftershock.

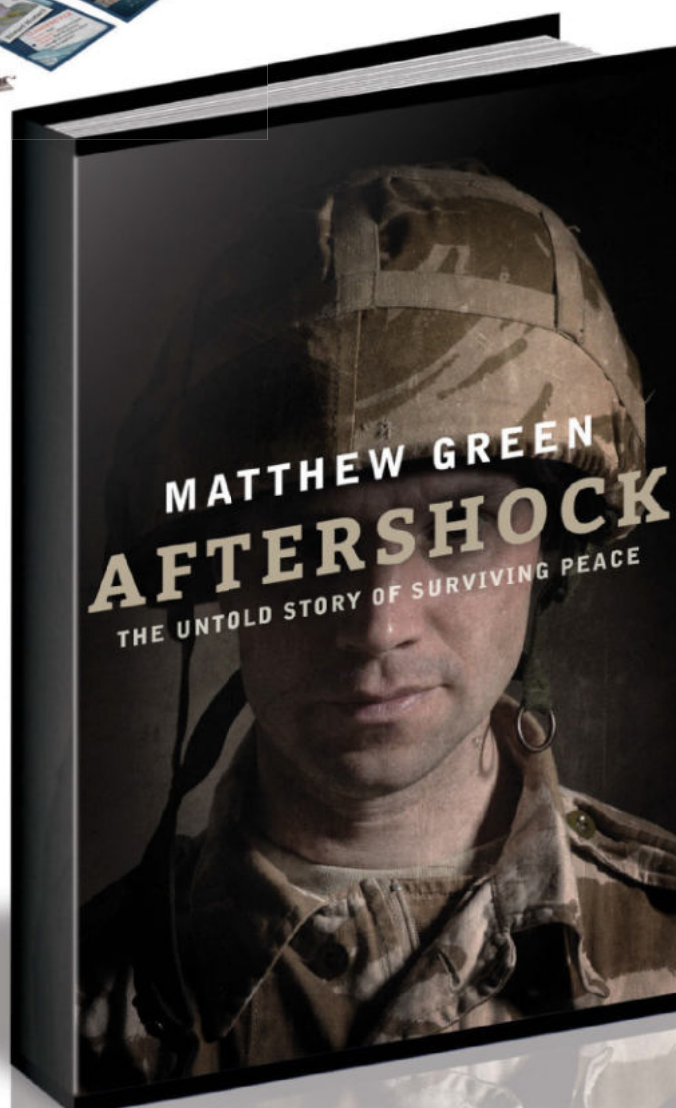
From "case one", a traumatised infantryman who was studied by a pioneering doctor during World War I through to the ongoing work of charities such as Combat Stress, Green examines the cruelty inflicted by Post-Traumatic Stress Disorder (PTSD) on soldiers and their families, and the efforts to heal them.

The fear and depression that stalks these veterans, who fought in places as varied as Northern Ireland and Afghanistan, manifests itself in a myriad of horrendous ways. Hallucinations, night terrors and an overwhelming sense of numbness to the world envelope so many seemingly lost souls.

One of Green's subjects could only find an escape through suicide; another still watches the surrounding windows for IRA snipers. It is little wonder that so many descend into the dreaded 'spiral'.

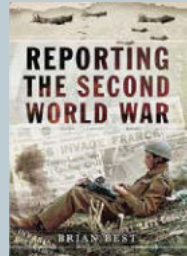
However, the medical improvements and ever-growing public understanding highlighted in the second part of this book provide hope. For every person that the system fails, many others find what Green calls "true healing" through treatments as varied as art therapy and meditation.

This is indeed a moving and sometimes enraging story, fortunate that it has an author of Green's calibre to tell it. Only through such works can we hope that this all too private suffering will be brought to the forefront of public awareness. Only then can these soldiers find their salvation and a life unhaunted.



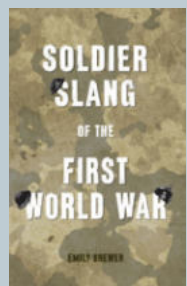
ALL ABOUT HISTORY RECOMMENDED READING

REPORTING THE SECOND WORLD WAR



Chronicling the exploits of the likes of Ernest Hemingway, David Dimbleby, Robert Capa and more as they put themselves in harm's way in order to capture the biggest scoops of their time, Brian Best looks at the stories of the people who reported the war. An engaging and well-researched new angle on World War II.

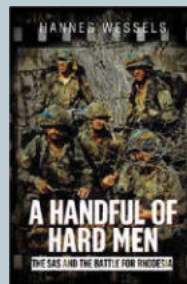
SOLDIER SLANG OF THE FIRST WORLD WAR



Soldier Slang does a sterling job of presenting the many phrases of the era, introducing the reader to almost every piece of dialect used by soldiers during the Great War. Looking at the puns, neologisms, slang, dialect and mispronunciations that entertained the troops, kept them out of trouble with their officers and could even

help them escape a sticky situation, this work provides some interesting insights.

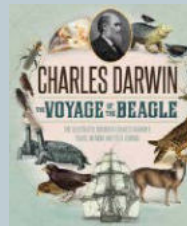
A HANDFUL OF HARD MEN



Focusing on the story of Captain Darrell Watt of the Rhodesian SAS, *A Handful of Hard Men* recounts the trials and tribulations he and his team endured while resisting the forces of Robert Mugabe and Joshua Nkomo. Their story is nothing short of mind blowing – drinking their own urine and eating

used tea bags to survive when resupply missions failed. It's impossible not to marvel at the bravery and determination of these soldiers – the term 'hard men' fails to do them justice.

THE VOYAGE OF THE BEAGLE



Furnished with illustrations and excerpts from Darwin's later scientific and cultural watershed work *On The Origin Of Species*, as well as modern photos that give his memoirs appreciable context, this edition is, thankfully, more than just a

reprint in hardback of Darwin's account of his five years circumnavigating the planet. Compulsory reading for any biologist and a potential source of inspiration for those bitten by the travel bug.

MY TARGET WAS LENINGRAD

Writer: Philip Goodall **Publisher:** Fonthill Media **Price:** £20 **Released:** Out now

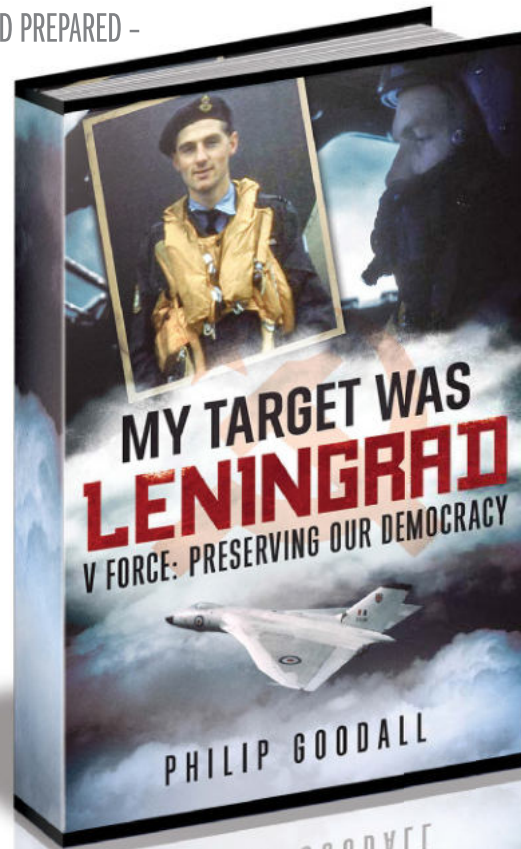
ONE MAN'S ACCOUNT OF HOW HE WAS TRAINED – AND PREPARED – TO NUKE A CITY OF MORE THAN 4 MILLION PEOPLE

This first-hand account of the author's experience as an RAF bomber pilot during the Cold War makes for unsettling reading. In March 1949, Goodall, then 18 years old, was called up to do his National Service. Joining the RAF, he was trained to fly Britain's new breed of jet planes, before opting to stay on in the air force as a career pilot.

By the mid-1950s, he was flying with bomber command's V-force, tearing up the skies in a Vickers Valiant before moving onto the Avro Vulcan, where his role, in the event of a nuclear war with the USSR, was to eradicate the city of Leningrad (present-day Saint Petersburg).

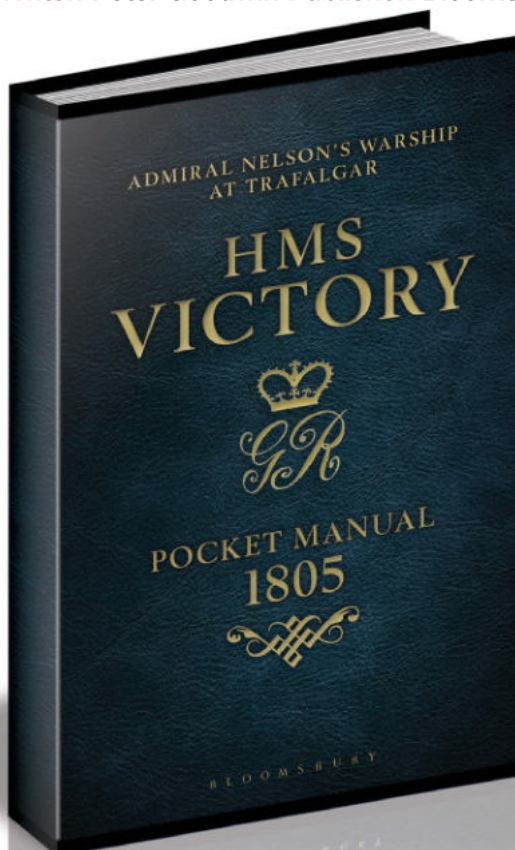
Part affectionate memoir, part chilling account of how close we came to global annihilation, this is a disturbing yet intriguing book.

"PART AFFECTIONATE MEMOIR, PART CHILLING ACCOUNT OF HOW CLOSE WE CAME TO GLOBAL ANNIHILATION, THIS IS A DISTURBING YET INTRIGUING BOOK"



HMS VICTORY POCKET MANUAL

Writer: Peter Goodwin **Publisher:** Bloomsbury **Price:** £8.99 **Released:** Out now



EVERYTHING YOU NEED TO KNOW ABOUT THE ROYAL NAVY'S MOST ICONIC SHIP ALL EXPERTLY CRAMMED INTO A BANTAMWEIGHT PACKAGE

In all, HMS Victory took part in five sea battles during its 34 years of active service, but it is the ship's final engagement under Nelson at Trafalgar for which it is best known. Nelson's famous defeat of Napoleon's fleet off the Spanish coast in 1805, and his subsequent martyrdom to the British Imperial cause, is all captured in this superb little book as you'd expect. What isn't expected is just how much more the author manages to pack into what he calls a pocket manual.

Writer Peter Goodwin was a historical adviser to HMS Victory in its role as a living museum in Portsmouth for more than 20 years, and it shows. Every possible question about the ship, from the way it was constructed to what its crew ate for breakfast, is systematically lined up and efficiently answered. This book may be pocket sized, but its scope and depth is encyclopaedic.

UNDER THE MAPLE LEAF

Writer: Kenneth B Cothliff **Publisher:** Fighting High Ltd

Price: £19.95 **Released:** Out now

THE COURAGEOUS AND THRILLING STORY OF FOUR UNSUNG HEROES WHO ANSWERED A CALL TO DUTY THAT WASN'T THEIRS

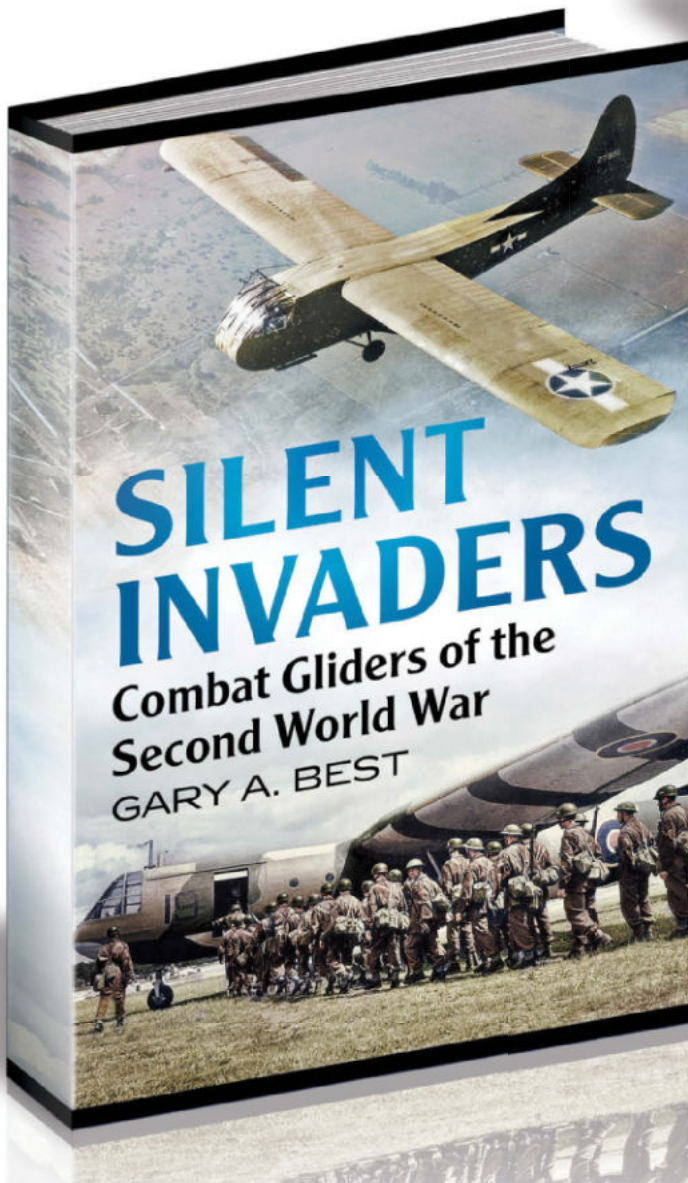
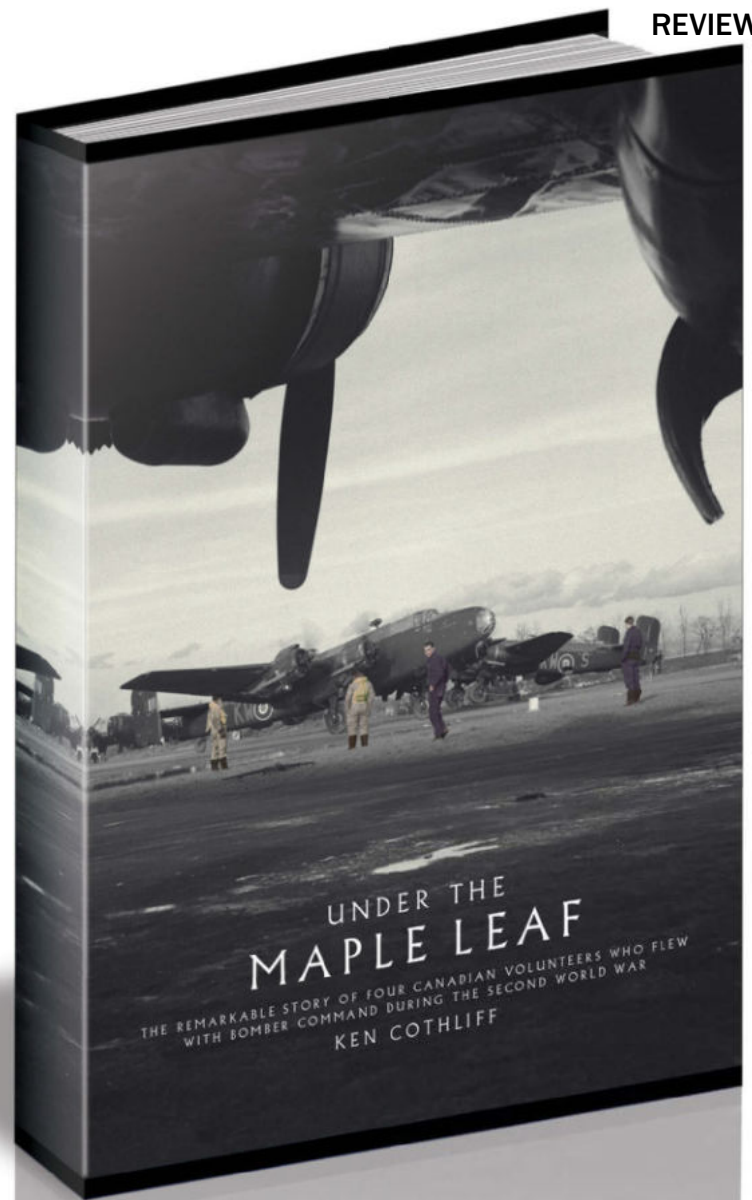
The contributions of the British and American airmen to the successful bombing campaigns waged during World War II are well known. What has been less documented is the critical role played by the volunteers of Canada.

Through the eyes of four such men who chose to fight against Hitler's war machine, Cothliff superbly tells a story too often overlooked. From bombing raids in the Bison Squadron to the controversial aerial assaults on Nuremburg, Cothliff delves into the world of pilots who were not

obligated to fly into the jaws of almost certain death, but still readily signed up to do so.

Segmenting his book into four sections, each in turn dedicated to one of his subjects, Cothliff, whose own father was a Canadian pilot during World War II, writes in a glowing, almost affectionate tone, peppering his work with exhilarating episodes of bravery and tragedy in equal measure.

This is a must read for anyone hoping to gain a real insight into the lives of the unsung heroes of the Allied bomber fleets.



SILENT INVADERS

COMBAT GLIDERS OF THE SECOND WORLD WAR

Writer: Gary A Best **Publisher:** Fonthill Media **Price:** £20

THE STORY OF THE MEN INSIDE THE 'FLYING COFFINS'

Silent Invaders is the brilliant account of the courageous yet little known exploits of the men who flew "through the gates of hell" in the gliders of World War II. Piloting these unique machines without armaments or parachutes, the phenomenal risk that these men faced in landing their charges, let alone surviving enemy fire, claimed many lives.

However, as Best records, this did not prevent them from being deployed on operations as critical as D-Day and Market Garden. Far from playing a marginal role, the fact that 1,899 gliders were used in the failed Market Garden alone is testament to their prevalence during the conflict.

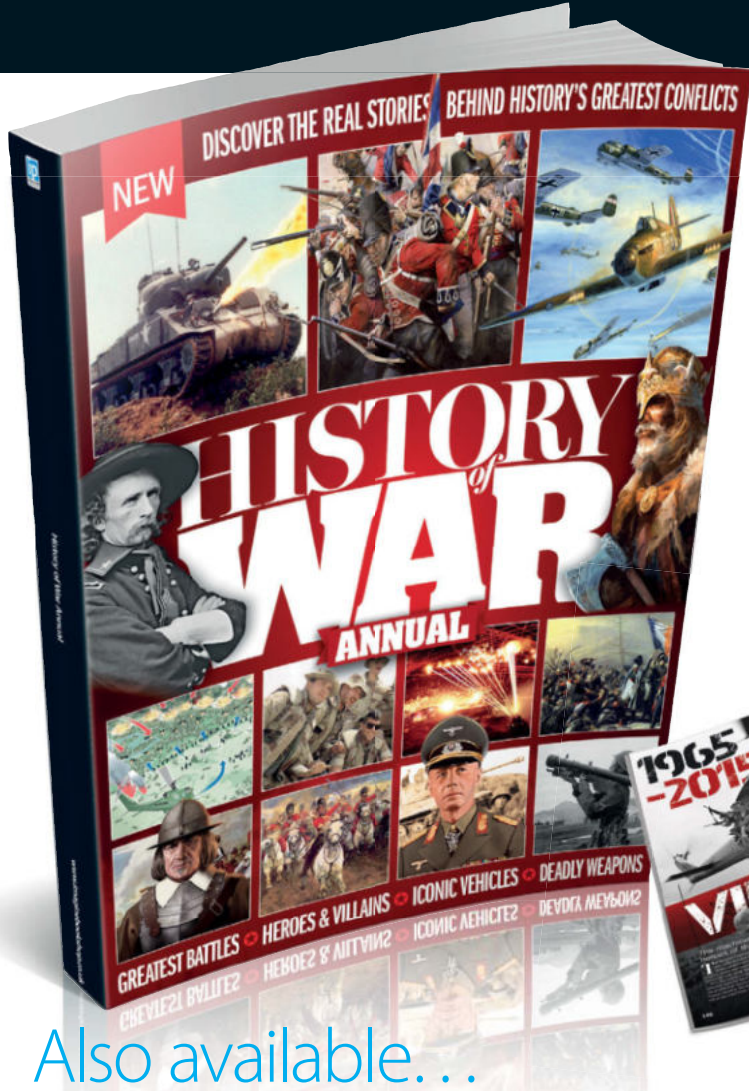
The trials and tragedies of the men at the helm of contraptions such as the British-made Horsa make for an eye-opening read. Best's research, heavily supplemented with the accounts of the men who navigated these iron sparrows, will ensure that their sacrifices occupy their rightful place in the annals of aviation warfare.

"THE TRIALS AND TRAGEDIES OF THE MEN AT THE HELM OF CONTRAPTIONS SUCH AS THE BRITISH-MADE HORSA MAKE FOR AN EYE-OPENING READ"

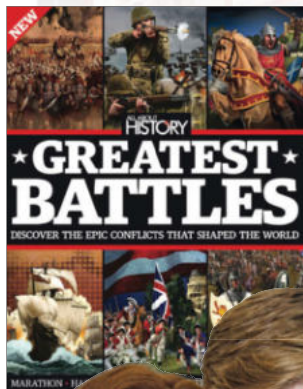
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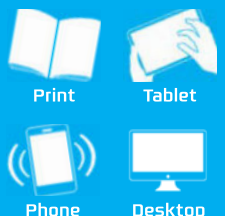
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VIKING SWORD HILT

This find in the Hebrides demonstrates the projection of Viking power in Scotland

Right: This Viking sword hilt is the finest example of its kind found in Scotland

"SWORDS WERE VERY IMPORTANT SYMBOLS FOR NORSE WARRIORS, AND THE ELABORATE GRIP ON THIS HILT SHOWS THAT ITS OWNER WAS WEALTHY"

The Vikings conquered many parts of the British Isles from the 8th century onwards. However, they achieved their most lasting presence in Scotland, where Norwegian Vikings became a dominant presence. It is easy to see why – the Isles of Shetland are only 306 kilometres west of Norway. At one point, Norse warriors and settlers directly held Shetland, Orkney, the Hebrides, the islands of the Firth of Clyde and the Isle of Man. Irish chroniclers also recorded in 849 that there was a king of "Viking Scotland". In this sense, mainland Scotland was virtually surrounded by pagan warriors with a fearsome reputation.

This beautiful brass sword hilt demonstrates the strength of Viking power in the Scottish islands. It was found on the island of Eigg in 1830 and dates from the 9th century. Originally it would have formed part of a double-edged broad sword richly decorated with animals and geometric patterns made of silver thread. Swords were very important symbols for Norse warriors, and the

elaborate grip on this hilt shows that its owner was wealthy.

The mound where it was found contained signs of a pagan burial, with bronze items found nearby. Every warrior needed his sword buried with him so he could enter Valhalla, but on Earth, these weapons enabled the Vikings to exert a powerful grip on Scotland that lasted for centuries. Indeed, the Kingdom of Norway did not formally relinquish the Northern Isles to the Scottish Crown until the 15th century.



Above: A 9th-century Viking helmet found at Gjermundbu in Norway

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The Desert Rats' Cromwell

A vehicle made famous by the British 7th Armoured Division, who had been dubbed the Desert Rats for their exploits in North Africa. However, the 7th Armoured were not issued with Cromwells until 1944, when they returned to the U.K. to prepare for D-Day. They fought in their Cromwells across France and into Germany, and eventually took part in the Victory Parade on September 7, 1945, in Berlin.

Development for the Cromwell first began in 1940 when the General Staff knew the Crusader would soon become obsolete. The tank was the fastest British tank to serve in the war, with a top speed of 40 mph (64 km/h). Its dual purpose 75 mm main gun had HE and armour-piercing capabilities and its armour ranged from 8 mm up to 76 mm overall.

In World of Tanks, you can command the Cromwell from the driver's seat. World of Tanks is an online PC game dedicated to tank warfare in the mid-20th century, with over 300 of history's most iconic tanks.

A variety of tiers, upgrades, equipment, and decals allow you to make each tank, your progression and your gameplay experience unique.

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